SOUTH MARKETING ISSUE
Pages 9-16

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A WEEKLY NEWSPAPER FOR THE FARM CHEMICAL MANUFACTURER, FORMULATOR AND DEALER

Published by The Miller Publishing Co., Minneapolis, Minn.

Vol. 4 | Accepted as Controlled Circulation Publication at Minneapolis, Minn. | MAY 20, 1957 | Subscription Rates: $5 for 1 year, $9 for 2 years | No. 20

Federal Agencies Endorse Safety of DDT Spray Program

Statement Issued to Counteract Reports on Gypsy Moth Project

(SEE EDITORIAL ON PAGE 22)

WASHINGTON—Three government agencies have joined in a public statement, issued by the U.S. Department of Agriculture,* endorsing the safety of methods established for conduct of the cooperative state-federal spray program in the Northeast against the gypsy moth.

USDA said the reason for the statement is the fact that a number of reports have been published which may have unduly alarmed the public concerning alleged hazards to both human health and wildlife from using DDT to eradicate the gypsy moth.

The three agencies are the Public Health Service of the Department of Health, Education, and Welfare; the Fish and Wildlife Service of the Department of the Interior; and the Agricultural Research Service of the Department of Agriculture.

Aerial spraying with DDT is now underway in southern New York and in some parts of northern New Jersey and northeastern Pennsylvania. This is a cooperative state-USDA program, fully supported by agricultural agencies of the three states concerned as well as by the federal government. It is aimed at eradication of leaf-eating gypsy-moth caterpillars from almost 3 million acres, much of which is heavily forested land in New York State.

A summary of the joint statement appears in the editorial on page 22 of this issue.

IMC to Sink Shaft For New Potash Mine in Canada

CHICAGO—International Minerals and Chemical Corp. announced May 14 that it will start immediately sinking a shaft for a new potash mine in the Canadian province of Saskatchewan.

The site is on 450,000 acres which International controls under permits near Esterhazy, about 150 miles east of the provincial capital of Regina.

Louis Ware, president of IMC and its subsidiary, International Minerals and Chemical Corp. (Canada) Ltd., said that the company's potash mine in Carlsbad, N.M. has been operating at capacity in recent years supplying about 20% of the potash products used in the U.S. He said that the new Canadian project will take care of the company's expanding business.

Commenting on the character of the Canadian ore, Mr. Ware said, "It has been thoroughly drilled and has

(Continued on page 20)

House Kills Soil Bank's Acreage Appropriation; Keeps Remainder Intact

By JOHN CIPPERLY
Croplife Washington Correspondent

WASHINGTON, D.C.—The soil bank acreage appropriation for the next fiscal year was killed last week by the House. This cut came when the House voted to halt the appropriation for acreage reserves, but it still leaves intact the authorized payment of approximately $250 million for the conservation reserve phase of the soil bank program which is now bulked into the Agricultural Conservation Program for payment.

Ezra Taft Benson, Secretary of Agriculture, and the administration objected to this cut, with Mr. Benson speaking out for retention of the acreage reserve program for next year's crops since the soil bank had not had a fair chance to show its merit. It may be recalled that some time ago Mr. Benson opposed the soil bank in principle, but when Congress forced his hand he finally took the soil bank to his bosom. Now he is figuratively its staunchest supporter.

Within his organization it is hard to find any "team-work" following for the Secretary's present enthusiasm. In fact, most USDA officials privately believe that the elimination of the soil bank to the tune of one billion dollars would be an effective way of reducing the budget.

The soil bank surgery was the technique of the Democratic majority in the House of publicly spanking Mr. Benson for his farm program policies, it is said.

The Democratic majority, sparked by the still solid cotton south rigid price supporters, were not voting economy, however; they are said to have been voting anti-Benson politics—such politics may also obtain some support within the corn and wheat belt states of the Midwest where the Republicans face serious election problems in 1958.

Now that the House has acted on the soil bank appropriation, it still reserves an escape exit through the House agriculture committee.

(Continued on page 17)

50 Counties Produce 47% of Cotton Crop in 1956, Census Report Discloses

WASHINGTON—A new aid for industry sales planning was released last week by the Bureau of the Census in a report of leading cotton producing counties in the U.S.

The report discloses that the 50 leading counties accounted for 47% of all the cotton produced from the 1956 crop. They turned out 6,193,994 bales of the total output of 13,151,208 bales.

Of the 50 leading counties, 20 were in Texas, eight in Arkansas, seven in Mississippi, six in California, four in Missouri, three in Arizona and two in New Mexico.

Kern County, California, was the leading cotton producing county with 416,578 bales. Fresno County, California, ranked second with 381,795 bales. Pinal and Maricopa counties, Arizona, ranked third and fourth with 337,691 and 328,995 bales, respectively. Tulare County, California, ranked fifth with 244,391 bales.

Only two other counties produced more than 200,000 bales. These were Lubbock County, Texas, sixth in U.S. rank with 240,295 bales; and Mississippi County, Arkansas, seventh in rank with 208,962 bales.

The 50 leading cotton producing counties in 1956 and the number of running bales produced were:

1.	Kern, California	416,578
2.	Fresno, California	381,795
3.	Pinal, Arizona	337,691
4.	Maricopa, Arizona	328,995
5.	Tulare, California	244,391
6.	Lubbock, Texas	240,295
7.	Mississippi, Arkansas	208,962
8.	Hale, Texas	197,446
9.	Hidalgo, Texas	173,917
10.	Kings, California	167,637
11.	Lamb, Texas	166,693
12.	Hockley, Texas	156,764
13.	Cameron, Texas	143,376
14.	Sunflower, Mississippi	124,966
15.	Reeves, Texas	124,543
16.	Bolivar, Mississippi	121,500
17.	Crittenden, Arkansas	118,389
18.	New Madrid, Missouri	116,674
19.	Pemiscot, Missouri	111,690
20.	Coahoma, Mississippi	104,534
21.	Washington, Mississippi	100,566
22.	Terry, Texas	99,204
23.	Floyd, Texas	98,873
24.	Crosby, Texas	95,357
25.	Imperial, California	93,414
26.	Dunklin, Missouri	87,004
27.	Poinsett, Arkansas	85,479
28.	Phillips, Arkansas	85,177
29.	Dawson, Texas	84,020
30.	Leflore, Mississippi	82,838
31.	Lynn, Texas	79,247
32.	Jefferson, Arkansas	79,214
33.	St. Francis, Arkansas	78,409
34.	Craighead, Arkansas	76,980
35.	Willacy, Texas	74,367
36.	Dona Ana, New Mexico	73,854
37.	Bailey, Texas	70,578
38.	Madera, California	70,425
39.	Castro, Texas	61,712
40.	Nueces, Texas	61,665
41.	Yuma, Arizona	60,563
42.	Lee, Arkansas	58,530
43.	Tallahatchie, Mississippi	58,329
44.	Chaves, New Mexico	58,155
45.	El Paso, Texas	57,789
46.	Parmer, Texas	56,014
47.	Cochran, Texas	55,593
48.	Quitman, Mississippi	55,466
49.	Stoddard, Missouri	54,747
50.	San Patricio, Texas	53,499

Northwest Nitro To Expand Plant

MEDICINE HAT, ALBERTA — Plans for a new $150,000 addition to the plant of Northwest Nitro Chemicals Ltd. here were announced by T. L. Brook, president of the firm, at the recent annual stockholders meeting. Construction will get underway this summer.

The new unit will permit production of four new phosphate-nitrogen fertilizer formulations, which "will place the company in a stronger position to develop outlets. for its full production of fertilizer," Mr. Brook said.

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MULTI-MILLION DOLLAR BATTLE

Southern States Prepare for Imported Fire Ant Campaign

BATON ROUGE—The southern states now are mapping their strategy for a prolonged multi-million dollar battle against a fast-spreading, incredibly prolific and highly destructive insect pest, the imported fire ant. After reviewing the fire ant problem at a recent emergency meeting in Birmingham, Ala., entomologists and plant experts from 11 Southern states recommended that the federal government make available $12,000,000 annually for a federal-state control program to be continued until the imported fire ant is eradicated.

It is contemplated that if this plan is adopted the states concerned will put up $3,000,000 or more in matching funds. The total cost of an eradication campaign—if the ants can be eradicated—remains a matter of speculation. Some indication may be found in the fact that large-scale control methods now cost $4 to $6 an acre for insecticide and its application.

According to U.S. Department of Agriculture estimates, more than 20,000,000 acres already are infested in eight southern states. Delegates to the Birmingham meeting listed infested areas in Georgia, Arkansas, Louisiana, Mississippi, Alabama, Florida, South Carolina and North Carolina. The Agricultural Research Service of the USDA reports that the ants have been found in Texas also.

According to the present recommendations of the USDA, chlordane heptachlor, dieldrin and aldrin will be the chief weapons used against the

(Continued on page 18)

Fertilizer Increases Frost Tolerance Of Range Plants

DAVIS, CAL.—Tests by two University of California range researchers show that fall-fertilized soft chess and annual ryegrass were more able to withstand winter frost than unfertilized plants.

The studies were made by Horton M. Laude, associate professor of agronomy, and Lester J. Berry, extension range improvement specialist, both at Davis.

The survival rate for plants that received added nitrogen was as much as 32% higher in controlled tests than for the unfertilized plants, said Mr. Laude. Vigorous regrowth of the fertilized plants was visible within a week after the freeze. Two weeks after the freeze, the fertilized plants had produced as much as four times the amount of regrowth of unfertilized plants.

"Frost may kill back leaf tissue of fertilized plants," said Mr. Laude, "but the plants quickly send out new leaves. However, regrowth in frost-damaged unfertilized plants is greatly delayed."

Probably the improved frost tolerance observed in the experiments can be found only in areas of mild winters where night freezing alternates with day temperatures warm enough to promote growth, Mr. Laude said.

Fall fertilizer also gets the range seedlings off to a strong start and growing fast before the weather is too cold, he said. This provides more early feed on the range when the livestock need it most.

CORN MOVING SOUTH

PENSACOLA, FLA.—Corn Country, U.S., seems to be moving southward. There are 75 corn demonstration plots alone in Escambia County, for instance, according to C. A. Winter, assistant agricultural extension agent. More farmers are determining the needs of their corn ground by having it tested.

Wendy Fisher Heads Pest Control Group

PORTLAND, ORE.—Wendy Fisher of Portland's Paramount Pest Control Service was reelected president of the Pacific Northwest Pest Control Operators at the group's annual conference here recently. Merle Weaver, Portland, was named secretary.

Directors are Gene Saxton, Lewiston, Idaho; Claude Weaver, Yakima, Wash.; Robert Gold and William Senske, Spokane; George Atchison and Bert Meacham, Tacoma; Dick Turkain, J. E. Osborn and George Sells, all of Seattle, and Victor Dougherty, Vancouver, B.C.

The organization heard a U.S. Fish & Wildlife Department spokesman predict that the Northwest's starling problem will equal that of the East's within five years.

Walter Dykstra, Washington, D.C. pointed out that the birds, which didn't arrive in the Northwest until about eight years ago, have been multiplying at an alarming rate.

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Pennsalt Chemicals

Approved 1957-58 Ratios Announced For South Carolina

CLEMSON, S.C.—Approved fer lizer ratios and minimum analy grades for the fiscal year beginn July 1, 1957 in South Carolina h been announced by B. D. Cloaning director of the South Carolina D partment of Fertilizer Inspection a Analysis.

The 1-3-2 ratio and the 3-9-6 gra have been removed from the a proved list, and the minimum gra for the 1-2-2 ratio has been chang from 4-8-8 to 5-10-10.

Mr. Cloaninger said that all 3-9 and 4-8-8 should be removed fr dealers' warehouses prior to July The 4-8-8 may be sold as a specia grade for use on non-commerc crops only.

The approved grade ratios, w minimum analysis for each in pare thesis, are as follows:

2-3-1 (6-9-3), 1-3-3 (3-9-9), 1-3 (3-9-12), 1-4-4 (3-12-12), 1-3-3 (4-1 12), 1-3-6 (3-9-18), 2-5-3 (4-10-6), 1- 3 (4-8-12), 1-2-1 (5-10-5), 1-2-2 (5-1 10), 3-5-2 (6-10-4), 3-4-3 (6-8-6), 1- 1 (8-8-8), 1-0-1 (14-0-14), 1-0-3 (8- 24), 0-1-1 (0-14-14) and 0-1-2 (0-1 20).

The 2-3-1 grade must contain 25 or more of the nitrogen in water soluble form. The ratio 1-3-3 is dup cated on the list. Any mutliple of t approved ratio is permissible, a farmers' or customers' mixtures mu conform to the approved list.

Mr. Cloaninger also announced th April fertilizer sales in South Car lina totaled 199,381 tons, compar with 169,465 tons in April, 1956. Sa for the first 10 months of this fisc year (July-April) totaled 715,4 tons, a 3.6% decline from 742,0 tons in the comparable period a ye earlier.

Rain Ends Drouth, Slows Forest Fires In New England

BOSTON—Rain showered down New England May 10, ending eme gency conditions which had ke thousands of farmers tense for t previous two weeks.

The water ran in rivulets alo furrowed land and across pastur burned almost white by the drou and then smothered smoulderi woodlands which thousands of m had beat vainly in a two weeks' deal of uncontrolled fire. For t many harassed farmers the ra meant the difference between ban ruptcy and the chance for a go season.

For the previous two weeks, th saw their woodlands and fields tu into tinder dry areas in a Spri drouth season more severe than a could remember.

Farm agents said the dry sp hurt the hay crop. The drouth becam critical around Easter and continue More than 6,000 acres of pasture Massachusetts alone were destroye Agricultural authorities said the ar was short about 6 inches of rain du ing the past four months.

Virginia Sales

RICHMOND, VA.—Virginia fer lizer sales for the nine months end March 31 totaled 431,199 tons, com pared with 436,351 tons in a compar ble period a year earlier. The tot for the 1956-57 nine month period i cluded 393,749 tons of mixed goo and 37,450 tons of materials. Sal in the first quarter of 1957 amount to 277,124 tons, a gain from 273,6 tons in the first quarter of 1956.

MRS. HARRY H. HECTOR DIE

MIAMI — Mrs. Harry H. Hecto wife of the founder of Hector Supp Co., died recently while visiting Boston. Hector Supply Co. is one Miami's largest farm supply outlets

William Hazeltine

OINS SPECIALTY FIRM—William azeltine has joined Agricultural Spe-alties, Dallas, Texas, as an ento-ologist, the firm has announced. The ew appointee is a graduate of San se State and did graduate work in ntomology at the University of Cali-rnia. In his position with Agricul-ural Specialties, he will do labora-ory and field research and product evelopment in the fields of public ealth, pest control and animal para-tes.

956 Cotton Yield Lb. Below Record stablished in 1955

WASHINGTON—Cotton yield per arvested acre in the United States st year was 409 lb., which was 8 lb. elow the record high set in 1955 but ell above the 10 year average of 3 lb., the U.S. Department of Agri-ulture has reported.

Record-high yields were harvested Missouri, Louisiana, New Mexico, rizona, California and Kentucky. In exas, where considerable dry-land creage was not harvested, the yield the acreage harvested, at 280 lb., as only one pound less than in 1955, e highest of record. In most other tates, yields were generally less than e record-to-near records set in 1955, t were considerably above average.

Ginnings for the season indicate a 56 cotton crop of 13,310,100 bales 500 lb. gross weight, compared with 721,000 bales in 1955 and the ten ear average of 13,098,000 bales.

The 1956 harvested acreage is esti-ated at 15,615,000 acres, which is e smallest since 1879. The 1955 fig-re was 16,928,000 acres and the ten ear average is 22,060,000 acres.

orth Dakota Appoints ew Dean of College

FARGO, N.D.—Arlon G. Hazen has en named dean of agriculture and rector of the Agricultural Experi-ent Station at North Dakota Agri-ultural College. Mr. Hazen had been n an acting basis since last fall.

The college also announced that Dr. ohn A. Callenbach, formerly head of ntomology, became associate dean of griculture and associate director of e experiment station.

Both appointees have long back-grounds in agricultural work. Mr. Hazen joined the college staff in 1946 as irrigation engineer at the Williston Irrigation Experiment Station. He is a native of Oklahoma and holds degrees from both Okla-homa A&M and Iowa State College.

Dr. Callenbach came to North Dakota from Montana State College n 1953. Earlier, he had been on the aculties of the University of Idaho nd the University of Wisconsin. He olds B.S., M.S. and Ph.D. degrees rom the latter.

National Fertilizer Solutions Assn. Appoints Committees

CHICAGO—E. E. Crouse, U.S. Liquid Fertilizer Corp., Indianapolis, president of the National Fertilizer Solutions Assn., has announced the appointment of members to the activities, membership and statistical survey committees of the association.

Named to the activities committee are W. Harold Schelm, chairman, Schelm Bros., Inc., Peoria, Ill.; Hugh S. Surles, Jr., Planters Cotton Oil & Fertilizer Co., Rocky Mount, N.C.; J. M. Green, Krause Corp., Hutchinson, Kansas, and Melvin Beerman, Beerman Bros. Dehydrating Co., Dakota City, Neb.

On the membership committee are Wayne R. Johnson, chairman, Johnson Bros. Mills, Inc., Shenandoah, Iowa; Donald A. Fletcher, Pacific Supply Cooperative, Ontario, Ore., and K. T. Grant, Ontario Plant Foods, Ltd., Delhi, Ont.

Members of the statistical survey committee are George H. Serviss, chairman, GLF Soil Building Service, Ithaca, N.Y.; A. J. Schuler, Welcome Agricultural Chemical Co., Welcome, Minn., and Richard Cecil, Owensboro, Ky.

Members of the convention planning and standards committees were announced earlier in connection with plans for the association's annual meeting Nov. 17-19 at the Netherland-Hilton Hotel in Cincinnati. (See page 6 of the May 13 issue of Croplife.)

BIG BUSINESS

COLUMBIA, S.C.—Fertilizer ranks in the big ten among South Carolina's industries. According to the annual report of the South Carolina Department of Agriculture there were 71 fertilizer plants in the state in 1956 with the annual product valued at $33.8 million.

Stauffer Net Sales Dip in First Quarter

NEW YORK—Net sales of Stauffer Chemical Co. for the three months ending March 31, 1957 were $37,048,000, a decrease of 2% from sales of $37,767,000 during the corresponding period last year. Net earnings were $3,106,000 or 90¢ per share, compared with $3,302,000 or 95¢ per share in the first quarter 1956.

The decrease in quarterly earnings was due principally to three factors, the company said. First, price increases effected in recent months have not fully offset cost increases for labor, materials and freight which occurred in 1956. Second, the "late" spring, with cold temperatures prevailing throughout the country, has deferred demand for most of the company's agricultural products. And finally, expenditures for research and development and charges for depreciation and amortization have increased substantially above 1956 first quarter levels.

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INSECT AND PLANT DISEASE NOTES

Blight Outbreak Noted In South Carolina Report

ORANGEBURG, S.C.—An unusually severe outbreak of cotton seedling blight, tentatively identified as Ascochyta Blight, has occurred in this area in the past few days.

Indications are that stands will be seriously damaged; severe defoliations and many dead seedlings are found in some fields, and almost all fields are affected.

Thrips Move into Cotton As Grain Crops Mature

RIPLEY, MISS.—(Via Western Union) With small grain maturing rapidly, a heavy movement of thrips into young cotton was indicated on May 14. Armyworms are destroying cotton in fields adjacent to small grain, but most small grain fields are already past the control stage for armyworms.

There are heavy numbers of armyworms, but apparently little damage in the north Delta area so far. However, the situation must be watched closely.—A. G. Bennet.

Diseases Rather Than Bugs Do Damage in Illinois

URBANA, ILL.—Alfalfa diseases, and in some cases excessive water, are causing yellowing and wilting of alfalfa in many areas of western and southern Illinois. No spotted alfalfa aphids have been found in Illinois this spring, even though thorough searches have been made for them. Spotted alfalfa aphid is therefore not involved in this damage.

Pea aphids are now appearing in alfalfa fields, particularly in southern Illinois. Brown, moldy-appearing aphids are also present on the underside of leaves. They have died from a fungus disease. It is likely that this disease will hold the aphids in check until hay harvest unless we have very cool weather.

Black cutworm sometimes called the "overflow cutworm," may be a problem in areas where water stood on fields this spring.—H. B. Petty.

Unidentified Maggot Causes Concern in Colorado

FT. COLLINS, COL.—An unidentified maggot is causing heavy damage to wheat in northeastern Colorado, according to the weekly report of the Colorado Insect Detection Committee.

Originally, it was thought this insect was a wheat stem maggot, but closer examination indicated it is some other species. Counties affected by the mysterious invader so far include Weld, Washington and Yuma. Little can be done at this time to control the pest.

New Mexico Host to Numerous Aphids

STATE COLLEGE, N.M.—Cowpea aphids are medium to heavy and general on seedling cotton in Hidalgo, Luna, and Dona Ana counties. Infestations are light to medium and spotty in Eddy County. Growers are having difficulty with control on small plants and reinfestation is rapid. Winds also hamper insecticide application. Thimet treated seed is holding up very well.

Seed corn maggots are causing medium to heavy loss of stands in one field of cotton in Dona Ana County. Spotted alfalfa aphid infestations in alfalfa range from very light to heavy in Chaves, Eddy, Dona Ana, and Hidalgo counties. Build-up is general over the southern quarter of the state. Many growers are treating both new and old stands.

Pea aphids are generally light in most alfalfa fields with medium to heavy infestations reported in Catron and Dona Ana counties.

Greenbug infestations in small grains are light to medium and spotty in Catron, Dona Ana, Quay, and Eddy counties, and cowpea aphids are heavy on seedling tomatoes, chili, and beans in Dona Ana, Hidalgo, and Luna counties.

Thrips are light to medium in onions in Dona Ana, Eddy, and Luna counties, while cabbage loopers are medium to heavy on lettuce in Eddy and Dona Ana counties. Most growers are controlling them. Woolly apple aphids are moving up on apple trees in Lincoln County. Infestations are medium to heavy.

Cowpea aphid infestations on terminal growth of apples and pears are light to medium in Lincoln County.

Grasshoppers are hatching on range land in most of the infested areas in Lea, Roosevelt, Curry, Quay, and Harding counties.—John J. Durkin.

More Corn Borers Survive in Iowa

AMES, IOWA—About 20% more live corn borers are in Iowa this spring than a year ago, Harold Gunderson, Iowa State College extension entomologist, reports. He said results of the 1957 spring corn borer survey show an average of about 6,000 live borers per acre in fields inspected recently. Last year's similar survey showed about 4,000 live borers per acre.

Although the number of borers found this spring represents a substantial increase over last year, the extent of feeding damage to the 1957 corn crop will still depend largely on weather conditions and stage of corn growth in June when moths of the first brood of corn borers are expected to emerge. It's too early in the season, however, to predict when first brood borers will move in or how severe damage will be, Dr. Gunderson explained.

Chinch bugs were leaving winter quarters early in May. Surveys showed excellent survival, with adult bugs moving in blue grass, alfalfa and small grain. In dry weather, we could have locally-heavy chinch bug populations in southern Iowa.

Early observations indicate that 1957 may be another "cutworm year" in Iowa. A field of fall-seeded alfalfa in Carroll County was found destroyed by cutworms and similar damage has been reported from other locations.

Neighboring states report the heaviest infestation of clover leaf weevil since 1954. Clover leaf weevil larvae have been found in moderate numbers in central and southern Iowa. So far we have not found any fields that seemed to justify treatment. However, the larvae in central and northern Iowa are all small, and most of their feeding is still ahead. The present mild weather favors them.

Plant Diseases Noted In Massachusetts

AMHERST, MASS.—The rains the week-end of May 12 discharged a heavy load of scab spores from the old leaves on the ground. Orchards that were sprayed Thursday or Friday were protected against infection. This is a good time to apply a mercury combination for kickback and protection for additional insurance against scab.

Apple powdery mildew was found on terminal growth on water sprouts of Baldwins that were infected last year. The low winter temperatures did not kill it out.

Forty-nine curculio beetles were collected from Waltham trees on Monday, May 13. This makes a total of 18 per tree to date. Heavy cutting of apples is likely to occur when temperatures reach 75° or higher, unless fruit is well covered with methoxychlor or dieldrin.—C. J. Gilgut and O. C. Roberts.

Only Small Damage From Armyworm Reported

COLUMBIA, MO.—Some armyworm moths are still flying, which means that eggs are still being laid. So far, however, damaging numbers of worms have been found only in some rank grain fields in the bootheel. We are also beginning to find bronze cutworms in the bluegrass pasture areas of northwest Missouri. So far, we have not found any cutworm damage to seedling corn.

There is a gradual increase in spotted alfalfa aphids showing up, but we are still a long way from damage from these insects. Pea aphids, although still present in the north central sections of the state, got started too late to be much of a problem.—Stirling Kyd and George W. Thomas.

Not Much Activity Noted With Aphids in Maryland

COLLEGE PARK, MD.—Alfalfa weevil activity is at a low point in central Maryland. Most larvae have made their cocoons and pupated and adults of the new generation are appearing. For the first year alfalfa in Allegany County has been damaged by the weevil, infestations ranging from light to moderate.

Pea aphids are generally light except in Washington County westward. Meadow spittlebugs are comparatively light. A webworm, probably the garden webworm, was reported as injurious to alfalfa in Allegany County.

Insect pests are active on vegeta-

(Continued on page 8)

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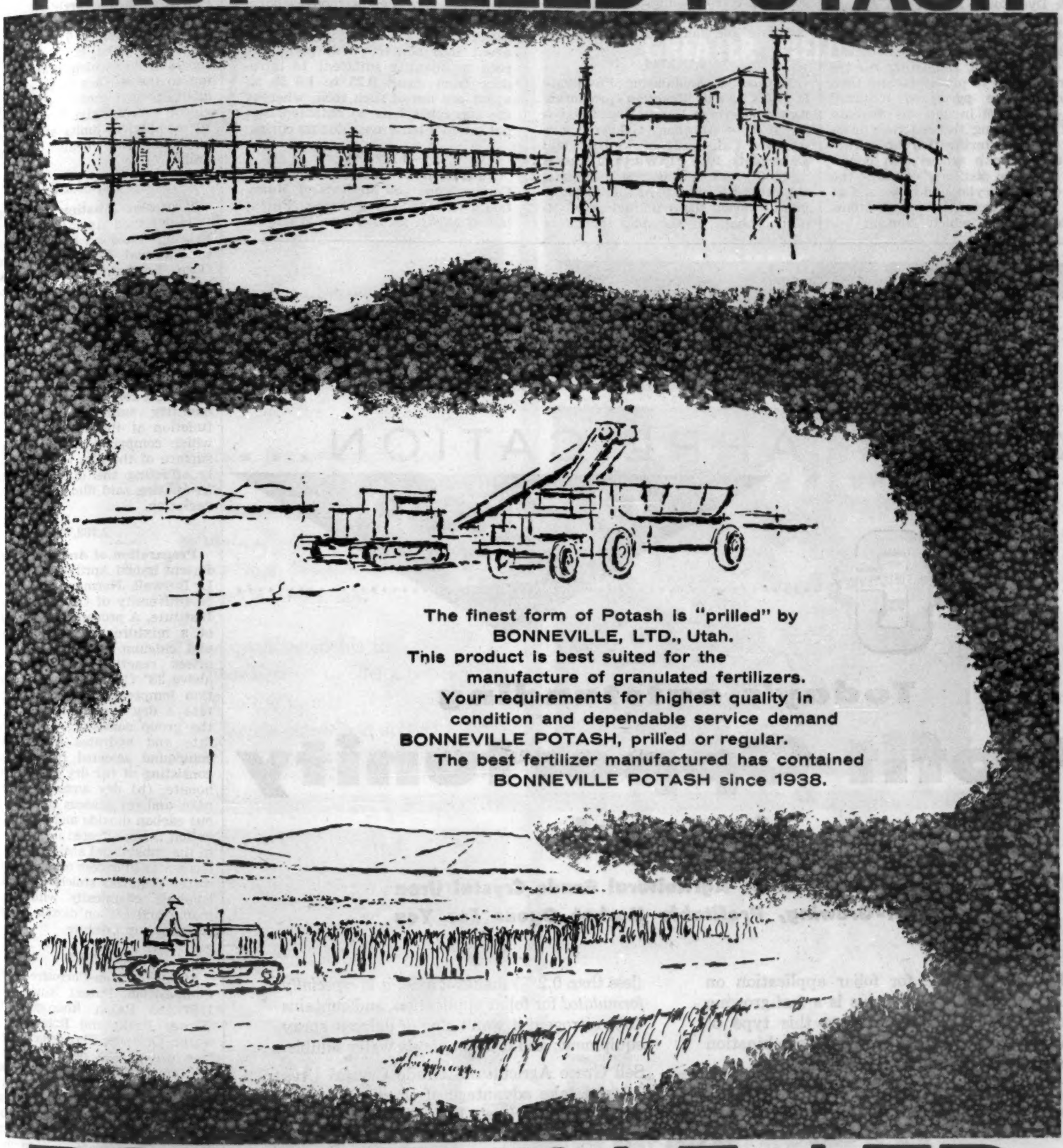

The finest form of Potash is "prilled" by
BONNEVILLE, LTD., Utah.
This product is best suited for the
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Your requirements for highest quality in
condition and dependable service demand
BONNEVILLE POTASH, prilled or regular.
The best fertilizer manufactured has contained
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Industry Patents and Trademarks

2,786,739

Continuous Process for the Production of Methacrylic Acid Esters and Ammonium Sulfate. Patent issued March 26, 1957, to John C. Eck, Convent, and Steven J. Tunkel, Morristown, N.J., assignors to Allied Chemical & Dye Corp., New York. A continuous process for the production of a methacrylic acid ester which comprises reacting acetone cyanohydrin with sulfuric acid, subjecting the reaction mixture to pyrolysis, and then esterifying the pyrolyzed material with an alcohol in aqueous medium and fractionating the reaction products in an esterification and fractionating column under such conditions that the distillate contains the bulk of methacrylic acid ester and at least 1% by weight of the bottoms of the column, which contain by-product ammonium sulfate compound, constitutes methacrylic acid ester, separating said bottoms into an aqueous layer containing said ammonium sulfate compound and an organic layer containing methacrylic acid ester, and recovering ammonium sulfate compound from said aqueous layer and methacrylic acid ester from said distillate and said organic layer.

2,786,746

Method of Acidulating Phosphate Rocks and Reaction-promoting Agents Therefor. Patent issued March 26, 1957 to Abraham Goldhaar, Los Angeles, Cal., assignor to Universal Detergents, Inc., Ft. Worth, Texas. A method of expediting and increasing the rate of formation of soluble phosphates during the manufacture of superphosphate by the acid treatment of phosphate rock, which comprises: forming an aqueous solution of a reaction-promoting agent comprising an alkali metal salt of a sulfonated mixture of naphthalene and alkylated derivatives of naphthalene, containing methyl groups and alkyl groups with 8 to 12 carbon atoms; adding said aqueous solution to sulfuric acid to produce a mixture containing between about 65% and 80% acid in which the reaction-promoting agent is adapted to form a homogeneous and fine dispersion without separation; and bringing the dispersion of sulfuric acid and reaction-promoting agent into contact with phosphate rock in quantity sufficient to introduce from about 0.25 to 1.0 lb. of agent per ton of such rock, whereby the superphosphate so obtained does not set to a hard mass during curing.

2,786,795

Fungicidal Trichlorodinitrobenzene Compositions and Methods of Manufacturing and Using Same. Patent issued March 26, 1957, to Waldo B. Ligett, Pontiac, Calvin N. Wolf, D troit, and Harry R. Dittmar, Roy Oak, Mich., assignors to Ethyl Cor New York. A novel bioregulant co position consisting essentially of to about 10 weight percent 1,2 trichloro-4,6-dinitrobenzene and fungicidally inert adjuvant as a c rier therefor.

2,786,796

Method of Repelling Flies wi Dibutylphenyl Monoether Polyglyc Patent issued March 26, 1957, Vivian H. Melass, Lake Jacks Texas, assignor to The Dow Chem cal Co., Midland, Mich. A method repelling flies which comprises app ing to the surface to be protected dibutylphenyl monoether of a po glycol, said polyglycol containing 8 10 oxyalkylene units and at least of said units being oxypropyle units.

2,788,320

Pesticidal Coating Composition Patent issued April 9, 1957, to Pa Bracey, London, England, assign to National Research Developme Corp., London. A method of contro ling the rate of release of pest-co trolling substances from a film pr duced from a coating compositi comprising a lacquer solvent and organic solvent-soluble aminoplast resin and plasticizer therefor, gether with an organic solvent-s uble pest-controlling substance in quantity sufficient to exhibit function at the surface of the fil which comprises skin hardening t surface of the film without materi ly affecting the interior thereof irradiating said film with ultra-vio radiation.

2,788,269

Preparation of Ammonium Sulfa Patent issued April 9, 1957, to Albe L. Burwell, Norman, Okla., assign to University of Oklahoma Resear Institute. A process in the producti of a mixture of ammonium sulfa and calcium carbonate which co prises reacting at a temperatu above 38° C. and below the dissoci tion temperature of ammonium su fate a dry compound selected fr the group consisting of calcium su fate and hydrates thereof with compound selected from the gro consisting of (a) dry ammonium ca bonate, (b) dry ammonium bicarb nate, and (c) gaseous ammonia, gas ous carbon dioxide and water, the r action being effected in the dry sta in the substantial absence of extran ous water in excess of that amount water required stoichiometrically combine chemically with the am monia and carbon dioxide present the reaction mixture.

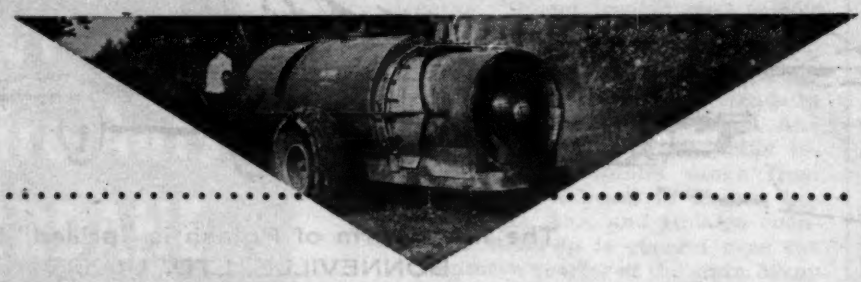
2,788,307

Stabilized Non-Corrosive Pesticid Composition. Patent issued April 1957, to Ralph Rodrogiez-Torre Winter Park, and Robert N. Fi water, Orlando, Fla., dedicated to t free use of the people of the U. An emulsifiable pesticidal conce trate comprising lindane, alkylat naphthalenes, isophorone, an emul fier, and an amount sufficient to pr vent interaction of the componen of the concentrate and to preve corrosion of metallic containers ho ing the same of a water-soluble i organic salt selected from the gro consisting of the thiosulfates a polythionates of a member select from the group consisting of sodiu potassium, and ammonium.

California Forum

FRESNO, CAL.—The spring mee ing of the Central California Agricu tural Forum will be held at Bruc Lodge near Fowler, Cal. May 23. T morning session will be devoted irrigation. In the afternoon s amendments and additives will topics of talks by Dr. Allen Lemm chief of the California Division Plant Industry, and Dr. L. E. Allis U.S. Department of Agriculture Riverside, Cal.

FOLIAR APPLICATION...



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for you!

When you sell Grace Agricultural Grade Crystal Urea
A *Fast-Growing, Profitable* Market Opens For You

The use of Urea for foliar application on both vegetables and citrus is a fast-growing trend today. That's because this type of application gives the farmer a combination of top quality *and* maximum yields.

Grace Agricultural Grade Crystal Urea has several advantages. Its *low biuret content* (less than 0.2%) makes it safe; it is *especially formulated* for foliar application, and contains 46% nitrogen; it won't clog or damage spray equipment; and it is *completely* water soluble.

Sell Grace Agricultural Grade Crystal Urea ... and take advantage of these new profit opportunities. Here's how Grace helps you:

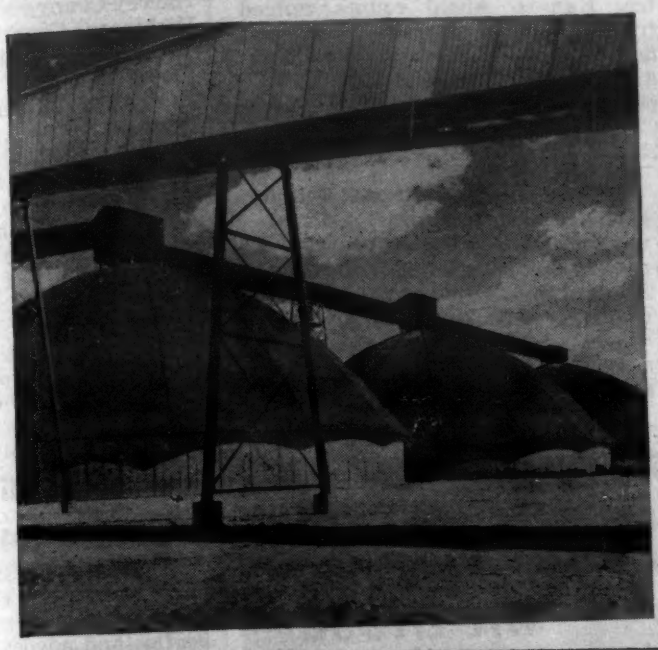
1. **NATIONAL ADVERTISING** *pre-sells* **for you!** Grace advertises its Agricultural Grade Crystal Urea to both vegetable and fruit growers nationally, with consistent, full-page, color advertisements. This *pre-selling* makes your job easier ... more profitable.

2. **SELLING AIDS ARE YOURS—FREE!** Effective, tested selling aids like this informative booklet are yours free, for distribution to your customers. Grace gives you what it takes to do the job *right* ... to establish your business as *headquarters* for foliar sprays.

WRITE FOR DETAILS

Grace Chemical Company

A DIVISION OF W. R. GRACE & CO.
MEMPHIS, TENN.



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FERTILIZER MANUFACTURERS
and
FARMERS

NATIONAL POTASH supplies the fertilizer manufacturer with coarse and standard grade muriate of potash that is dust-free, free-flowing and of uniform K_2O content.

These qualities enable the manufacturer to offer a better product to the farmer for his plant food dollar.

NATIONAL POTASH COMPANY
205 EAST 42nd ST. • NEW YORK 17, N.Y.

INSECT, PLANT DISEASE NOTES

(Continued from page 4)

bles in the Salisbury area: Striped cucumber beetles abundant on cucumbers and canteloupes; springtails have damaged canteloupes, just out of the ground; bean leaf beetles are eating holes in the leaves of early snap beans; flea beetles are moderate to heavy on sweet corn, tomatoes, and potatoes; asparagus beetles are abundant.—Theo. L. Bissell and Wallace C. Harding.

Leafhoppers in Florida

GAINESVILLE, FLA.—An outbreak of a leafhopper (Homalodisca Triquetra [Fabr]) is reported to have occurred on citrus at Largo, Pinellous County. Frank W. Mead, entomologist of the State Plant Board of Florida said in a wire to Croplife that control measures recommended by the Lake Alfred citrus experiment station included the application of parathion.

Delaware Records Heavy Weevil Damage

NEWARK, DEL.—Damage from alfalfa weevil is described as "heavy" in New Castle County, and "severe" in Sussex and most of Kent Counties, according to the Departments of Entomology and Plant Pathology, Extension Service, University of Delaware.

According to the bulletin, near total loss has been noted at several locations in the Bridgeville-Greenwood areas. Dr. L. A. Stearns, entomologist, and Prof. J. W. Neuberger, plant pathologist, warned on May 10 that measures to eradicate the weevils should not be delayed.

Spotted Aphids Develop In Kansas Fields

MANHATTAN, KANSAS—Recent surveys showed winged spotted alfalfa aphids present along roadside embankments and in a few alfalfa fields in Pottawatomie, Riley, and Marshall, Geary, Wabaunsee, and Shawnee, and in Dickinson County, central Kansas. Aphid counts ranged from 1 to 30 per 25 sweeps in open fields. Counts along roadside embankments generally ranged from 1 to 80 per 25 sweeps; one stop in Geary County gave counts of 40 to 1,750 per 25 sweeps.

Winged forms of spotted alfalfa aphids now appear throughout the north central area of Kansas. A rather extensive survey of Geary, Riley, Clay, Cloud and Republic counties, May 7-8, 1957 disclosed counts of 0 to 29 aphids per 25 sweeps. In some fields, counts along south slopes or terraces averaged 20 to 25% winged forms. Very fe spotted alfalfa aphids were found i Southeast Kansas counties.

Pea aphids were found in all a falfa fields surveyed in Riley, Po tawatomie, Marshall, Shawnee, W baunsee, Geary and Dickinson cou ties, northeast one-fourth of the stat Counts ranged from 12 to 2,500 p 25 sweeps. Survey stops in northe Harvey County, Marion, and Souther Dickinson Counties gave counts 100 to 625 aphids per 25 sweep There has been very little damag to alfalfa, but cool weather may slo the development of the natural co trols of these aphids.

Grasshopper nymphs were found nearly all alfalfa fields surveyed Riley, Pottawatomie, Shawnee, W baunsee, Geary, and Dickinson cou ties. Nymphs are also beginning appear in field margins and alon fence rows and roadsides. Coun ranged from 1 to 16 per 25 sweep The main hatch of grasshoppers ha not occurred but can be expected i the next three weeks.—David Matthew and Dell Gates.

Elm Beetles Hit New England States

BOSTON, MASS.—Entomologist in the six New England states ar warning of an invasion of elm lea beetles and advocating chemical con trol, and Boston's park departmen was taking steps to halt the destruc tion of historic elm trees on Bosto Common.

Grasshopper Populations Reduced in Spray Project

FRESNO, CAL.—Spraying opera tions in the Fresno area have suc ceeded in reducing grasshopper popu lations greatly, although entomolo gists state that the potential for major infestation this year is sti present.

The recent spray program covere from 10,000 to 12,000 acres in Fresn and neighboring Kings county at reported cost of about 50¢ an acre

Lawrence O. Haupt, Kings County agricultural commissioner, reporte that spraying began about May 1 and later in the month in Kern Coun ty. In the 1953 infestation, farmer learned that without early spraying many acres of crops were destroye before the pest could be stopped b a hurriedly organized control cam paign. The cost that year was $65,00 in addition to the crop loss.

This year about $50,000 is being raised to spray a total of 80,000 acre in the entire area, and the Federa Government is footing about one third of the cost.

The 1957 infestation potential i expected to be greater than 1953— the worst since 1940, and "the key to success is the timing of the spray program."

"You've got to get the grasshoppers before they begin flying," said John W. Dixon, agricultural commissioner.

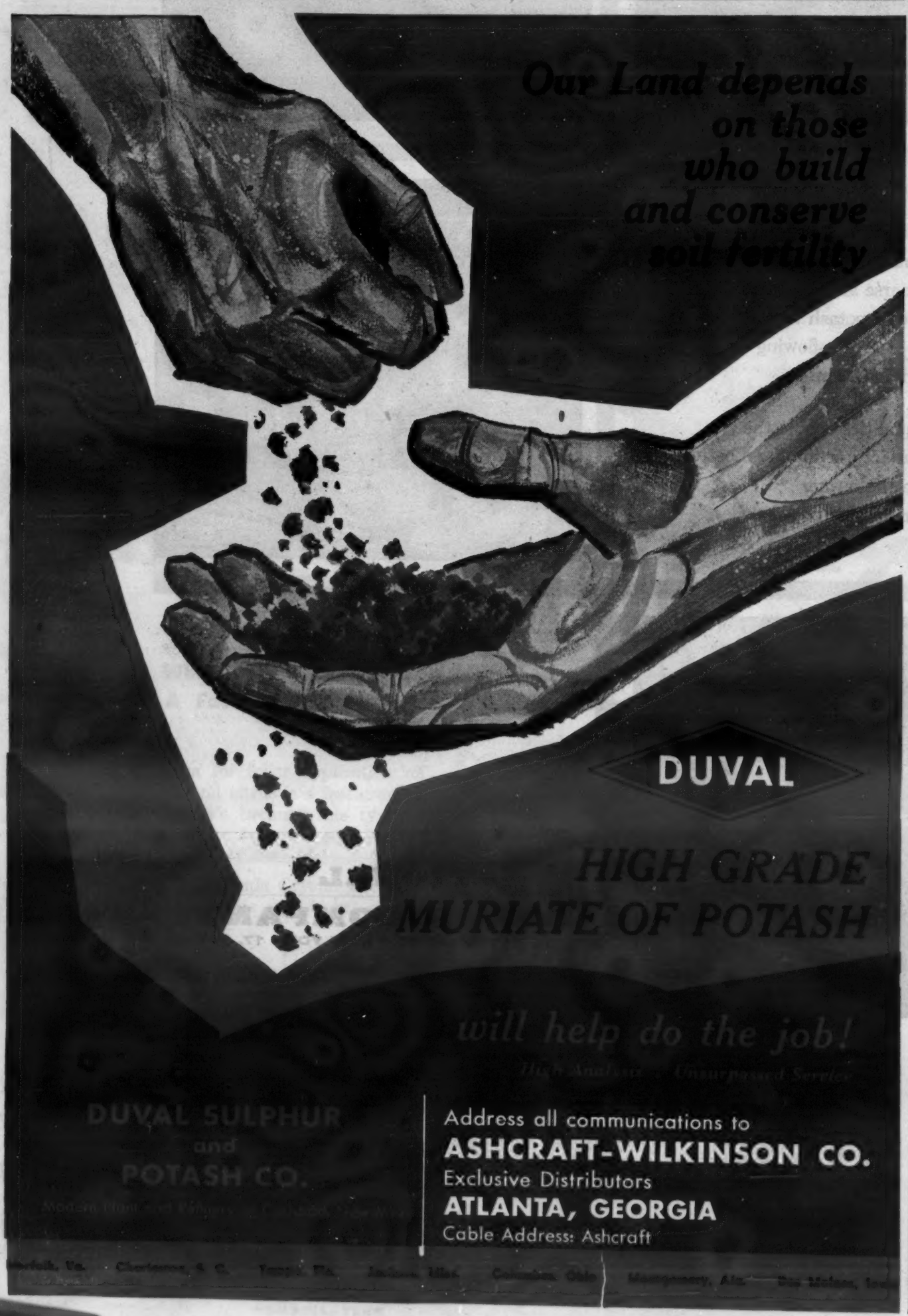
Replanting Necessary Due To Insects in N. Carolina

RALEIGH, N.C. (via Western Union)—Wireworms in many areas of North Carolina are damaging the tobacco crop more than usual, making replanting necessary in some areas.

The same is true in corn fields in many areas of the state, where bill bugs are causing sufficient damage to require replanting of corn in a number of places, according to H. E. Scott, entomologist. He adds that bean leaf beetles are also very numerous this year in North Carolina, and that the housefly population is increasing very rapidly throughout the state.

OKLAHOMA TONNAGE

OKLAHOMA CITY — Fertilizer sales in Oklahoma during the first quarter of 1957 totalled 27,868 tons, the Oklahoma State Department of Agriculture has reported.



Special Merchandising Section

Better Selling

Marketing News and Features

FLOWER SHOW EXHIBITS—Several of the displays at the ninth annual Metropolitan Miami Flower show are shown above. At the left, Charles Wilson, south Florida representative for California Spray-Chemical Corp., is shown explaining the Ortho "Bug Gallery" to a visitor. A portion of the Florida East Coast Fertilizer Co. exhibit is shown in the center photo. Howard Bardsley, sales promotion manager for the firm, is pictured serving a soft drink to a visitor. At the right, Tom Gormley, Re-Mark Chemical Co. sales representative, is shown at the Re-Mark exhibit, first in the commercial class.

Industry Companies Have Exhibits at Miami Flower Show

MIAMI—There were over 25,000 paid admissions of $1 each at the ninth annual Metropolitan Miami Flower Show, the season's largest horticultural event here.

Commercial exhibitors went all out to prepare exhibits which were dignified, artistic, educational and interesting. They were so successful that the section set aside for commercial men was usually far more crowded than the garden club exhibits.

Among the 31 commercial participants, there was a good representation of chemical companies, seed stores, nurseries and other allied trades.

The Hughes Seed Store had an exhibit which proved to be of considerable interest to visitors. The booth consisted of a plot of sod, featuring a large color picture of the firm's original store which was built in Miami in 1898. This picture, in the front of the exhibit, stopped nearly every passer-by who studied it, and noticed the large background where miniature bags of Hughes products were in niches, with blinker lights alternately featuring each product. The Hughes company operates both wholesale and retail outlets in the fertilizer and garden supply business.

Re-Mark Chemical Co., Miami, took first prize in the commercial exhibit category with a lifesize wall mural in the back of its booth. The mural featured a housewife with a spray-gun and a cloud of spray, which was made even more effective by flashing lights. At the front of the booth, visitors were invited to register for a chance on free bags of fertilizer which were given away twice daily.

California Spray-Chemical Corp. provided an attractive display of its products, plus a place for visitors to register for free gardening booklets to be sent to their homes. The feature attraction of their exhibit was a large cardboard on which were mounted color photographs of pests at work on various plants. The Ortho representative further explained the identity of the pictured pests and told how to combat them.

Florida East Coast Fertilizer Co., Homestead, Fla., had a large outdoor garden type exhibit, with wrought iron furniture and umbrellas. Free soft drinks were served here to thirsty show visitors. FEC also gave away bags of fertilizer to lucky ticket holders who visited their exhibit.

Other exhibitors with displays were Swift & Co., Tech-Scientific Supply Co., Nutrilite, Lebanon Chemical Co., Hector Supply Co., Kilgore Seed Co., and numerous nursery and nursery supply companies.

By RAYMOND ROSSON

County Agent, Washington County, Tenn.

Have you ever asked any of your farmer dairymen, "How much milk do you get per acre from your farm?"

Several of us visited one of our dairymen a couple of weeks ago and that question was put to him, and here is his answer: "In 1956 I sold 3,183 lb. of milk for each of my 118 cleared acres. I milked an average of 34 cows. I had 40 acres of orchard grass, ladino clover and alfalfa pasture. I also had a pasture with fescue, ladino and alsike clover and 33 acres of bluegrass pasture.

"In another 15-acre field I had alfalfa, ryegrass and vetch which I used for winter pasture, silage and hay and I also had 11 acres in alfalfa for hay. There was one acre in tobacco. No corn."

The farmer continued: "I sold 10,922 lb. of milk per cow and the return was $507 per cow. I bought $149 worth of feed per cow and the average milk return above feed cost per cow was $358.

"We produced 2.12 tons of legume hay per animal unit and .14 ton of other hay per animal unit along with 4.08 tons of silage per animal unit. And, by the way, we made 2,234 lb. of tobacco on the one acre."

By this time we were all ears, and we asked him: "What were your farm sales per acre of usable land?" And the answer was: "$169 per acre for the 118 acres." Then we had one more question, and it was, "How much did you spend on fertilizer per acre?" His answer: "I used $9.33 worth of fertilizer average, for the 118 acres."

Are you a good fertilizer salesman? The farmer is deserving.

SHOP TALK

OVER THE COUNTER

By Emmet J. Hoffman

Croplife Marketing Editor

Farmers have been called "stepchildren" by several authorities who add that it is important to understand the farmer's feelings and attitudes to do the best job of selling and advertising to him.

One speaker recently commented that there is undeniable evidence that farmers feel that they are not being treated equitably and for that reason regard themselves as "stepchildren." Farmers feel that somehow the workers in the cities are doing better than they are doing. And, as a result of that, farmers have a deep underlying feeling that they are victims of circumstances; that the products they sell bring prices which are set for them while the things they buy command prices set by the seller.

The dealer, according to this authority, should understand that the farmer derives a deep satisfaction out of doing things with his hands and watching things grow. He likes to be master of his destiny.

On the other hand, the farmer cannot control the weather, the climate and many political and economic conditions. The whole range of factors he cannot control gives him the feeling that he is surrounded by "enemies" on the outside.

Anyone selling to the farmer can do a better job if the farmer's feelings and attitudes are better understood. The farmer is searching for a salesman and dealer who respects his independence, his problems and his needs. The farmer wants to establish his personal relationship with the dealer in that way. He resents anybody who talks in a different fashion; he likes those who talk to him of his needs and his interests.

When you are writing your next ad, or making a sales presentation the next time, review in your mind beforehand the idea of the farmer feeling like a "stepchild" and proceed from that point. It might make an improvement in what you write or say.

Popular Practice

Dealers may be interested in a practice used by D. F. Breedlove, agricultural agent at Refugio, Texas, and possibly encourage local county agents to adopt a similar practice, if it is feasible.

Once a week Mr. Breedlove makes an inspection tour of the county's farms looking for cotton insects and he invites farmers to join him.

Mr. Breedlove examines the plants, identifies insects and then tells the farmers the habits of the insects and how to determine when the infestation is sufficient to warrant poisoning. He also explains the most effective insecticides and how to use them.

Mr. Breedlove urges all farmers to begin their control program as soon as the cotton reaches the four-leaf stage and recommends poisoning at seven-day intervals as long as the infestation lasts.

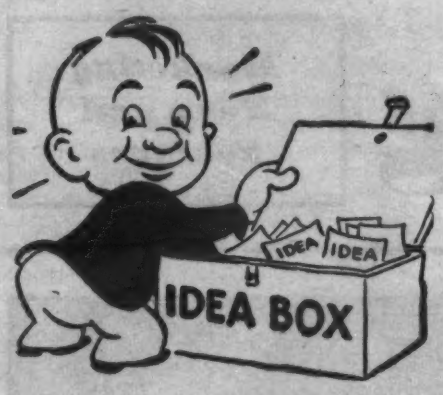
Many farmers overlook the damages done by the tiny fleahoppers and thrips during the early stages of the cotton's growth. Another reason for early season control, Mr. Breedlove says, is because it reduces the early build-up of boll weevils and other damaging insects that attack later in the season.

High Yields, Low Output Costs Go Together in Louisiana

BATON ROUGE—High cotton yields per acre and low production costs seem to go hand in hand in Louisiana, according to a recent study by I. W. Carson and Edgar Boone of the Louisiana Extension Service.

The extension workers checked into the cost records of 26 growers who had, on the average, made two bales per acre in 1956. Their costs (not counting charges for rent, taxes or management) ranged from 12.1 to 23.4¢ lb., and averaged 16.3¢. Net return per acre ranged from $103.34 to $291.96, the average being $191.78.

Biggest variation in any cost item was in insect control. It varied all the way from $4.45 to $65.00 per acre.



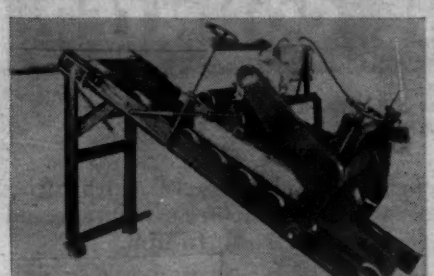
What's New...

In Products, Services, Literature

You will find it simple to obtain additional information about the new products, new services and new literature described in this department. Here's all you have to do: (1) Clip out the entire coupon and return address card in the lower outside corner of this page. (2) Circle the number of the item on which you desire more information. Fill in your name, your company's name and your address. (3) Fold the clip-out over double, with the return address portion on the outside. (4) Fasten the two edges together with a staple, cellophane tape or glue, whichever is handiest. (5) Drop in any mail box. That's all you do. We'll pay the postage. You can, of course, use your own envelope or paste the coupon on the back of a government postcard if you prefer.

No. 5669—Bag Flattener

A new heavy-duty bag flattener using power-driven "condersite" covered rolls and rough top belting has been announced by the Flexoveyor Manufacturing Co. The standard unit is 24 in. wide and has 6 ft., 8 in. centers and is powered by a 1½ h.p. gear motor. The unit can be furnished horizontal for floor mounting, or with casters for portability, or can be inclined up to 35°. Hand wheel adjust-



ment for both the receiving and discharge ends of the hugger conveyor is provided. All bearings are anti-friction ball bearings, with rolls having sealed-for-life ball bearings, it is explained. The company claims that the flattener "has been proved by continuous operation under severe lines" and that it "produces neat, operating conditions in production well-formed bags that are easier to handle and conserves shipping and warehouse space." Secure complete details by checking No. 5669 on the coupon and mailing it.

No. 6577—Fertilizer Equipment Catalog

A new 24-page 2-color catalog showing its line of equipment for the fertilizer industry has been published by the Stedman Foundry & Machine Co., Inc. Included in the publication are front and rear view machinery illustrations, foundation plans and information concerning the company's granular fertilizer process, four lines of batch mixers, continuous ammoniators, all-steel mixing units, tailings mills—both hammer and double cage types—and vibrating screens—single and multiple deck units. New machines not shown in any other company literature are included in this catalog No. 515. For a copy check No. 6577 on the coupon and mail it to Croplife.

No. 5688—Contract Blending

A brochure entitled, "Contract Blending to Meet Your Requirements," has been prepared by the Dearborn Chemical Co. The brochure states that the facilities of the firm's new, push-button control plant are available to manufacturers of compounded chemicals. Materials can be produced, packaged, labeled and shipped in accordance with desired requirements. The brochure lists these advantages: Automatic bulk chemical receiving and storage facilities; automatic weighing and blending equipment; volume chemical purchase prices; volume freight rates; low container costs; reduction of local inventory and delivery expense; low "per unit" finished product cost; excellent shipping connections; and personalized service. Check No. 5688 on the coupon and mail it to this publication to receive the brochure.

No. 6568—Municipal Insect Control

Literature pertinent to municipal insect control has been published by the Velsicol Chemical Corp., in a brochure called, "Here's What Chlordane Insecticides Can Do For Your City." The contents include technical bulletins dealing with a wide variety of insect pests, insect habits, insecticide dosages, and other aspects of successful municipal insect control. The subject is treated in considerable detail. The brochure is said to be useful both as a reference volume and a source of information and subject matter for those who plan and conduct meetings on community health problems. It also will serve as a guide in establishing standards for control methods and purchasing specifications which involve the amounts and quality of insecticides that should be used in a municipal insect control program. A copy can be obtained by checking No. 6568 on the coupon and mailing it to Croplife.

No. 6575—Portable Ribbon Mixers

A new line of portable heavy duty horizontal ribbon mixers is in production from 0.34 cu. ft. working capacity to 20 cu. ft. working capacity, announces the Young Machinery Co. The mixers are available in carbon steel, stainless steel, and Monel metal with or without heating or cooling jackets and move freely on heavy duty industrial casters. They are furnished with single or double ribbon or ribbon and paddle agitators. The mixers have dust-tight, gasketed, hinged covers with quick opening clamps, marine-type compression packing glands and anti-friction outboard bearings with sealed roller bearing pillow blocks—one fixed and one floating. Discharge is made either from the center or the end by a slide gate or a worm gear operated plug gate. The portable mixers are furnished as complete units with motors and drives. They are recommended for mixing dry, free flowing powders or granular materials. Secure complete details by checking No. 6575 on the coupon and mailing it to Croplife.

No. 6573—Company Booklet

The American Chemical Paint Co. has published the charter issue of the "ACP Pioneer," a 24-page booklet devoted to information about the company and its products. A chapter, with a number of pictures and illustrations, is devoted to the agricultural chemicals division. Described are research and development facilities, synthetic plant growth regulators, weed control products and the company's research farm. The booklet may be secured by checking No. 6573 on the coupon and mailing it to Croplife.

No. 6570—Repellent Base

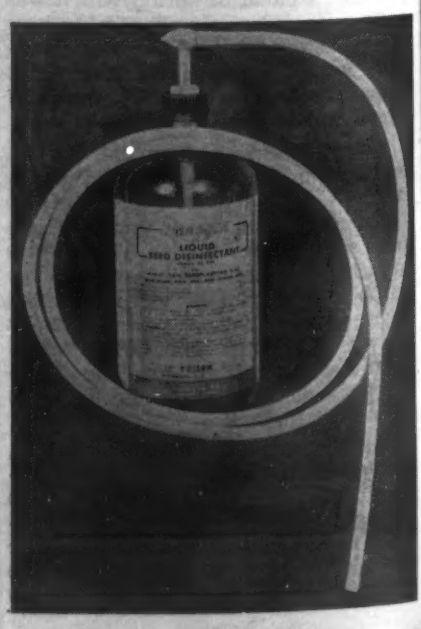
The Montrose Chemical Co. announces it is now offering the new insect repellent material, Diethyl Toluamide, which was developed by the U.S. Department of Agriculture. Diethyl Toluamide (DET) is described as an all-purpose insect repellent and it has been released for commercial use. DET can be applied directly to the skin or clothing and protects the user against mosquitoes, ticks, chiggers, fleas and biting flies for up to eight hours, it is claimed. Montrose is offering a high concentration meta isomer of Diethyl Toluamide to formulators of insect repellent lotions and similar preparations. Secure complete details by checking No. 6570 on the coupon and mailing it to Croplife.

No. 6572—Natural Mineral Products

The Minerals & Chemicals Corporation of America has published a technical information folder No. 1004 entitled, "Natural Mineral Products." The folder provides complete details of the company's range of products, including a carrier and diluent for formulating granular pesticides, fungicides, herbicides and soil fumigants and other products used as carriers, diluents, extenders and conditioners in farm chemicals. Secure the folder by checking No. 6572 on the coupon and mailing it to Croplife.

No. 5702—Liquid Seed Disinfectant

Panogen, Inc., is distributing liquid seed disinfectant in small sizes for home treating. The liquid is available in pint, quart and gallon bottles. A liquid dispenser is designed for use with the bottles. The dispenser attaches directly to the bottle and delivers the correct amount of disinfectant to the seed being treated,



Also Available

The following items have appeared in the What's New section of recent issues of Croplife. They are reprinted to help keep retail dealers on the regional circulation plan informed of new industry products, literature and services.

Send me information on the items marked:

☐ No. 5669—Bag Flattener	☐ No. 6570—Repellent Base
☐ No. 5688—Contract Blending	☐ No. 6571—Insect Spray Chart
☐ No. 5696—Conveyor	☐ No. 6572—Mineral Products
☐ No. 5702—Seed Disinfectant	☐ No. 6573—Booklet
☐ No. 6565—Spray Equipment	☐ No. 6574—Power Sprayer
☐ No. 6566—Nematode Chart	☐ No. 6575—Mixers
☐ No. 6567—Weed Control	☐ No. 6576—Insecticides Bulletin
☐ No. 6568—Insect Control	☐ No. 6577—Fertilizer Equipment
☐ No. 6569—Pump Units	☐ No. 6578—Safety Bulletin

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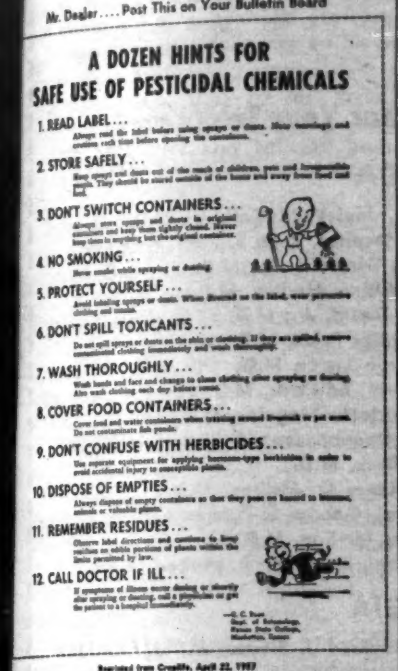
Reader Service Dept. Minneapolis 1, Minn.

mpany officials say. Full details will mailed without charge. Check No. 02 on the coupon and mail it to this blication.

No. 6578—Safety Information Bulletin

A reproduction of the feature, "A ozen Hints for Safe Use of Pesti-dal Chemicals" which appeared in roplife recently, is available to deal-rs. As illustrated here, it is printed n 8½ x 11 stock suitable either for


Mr. Dealer.... Post This on Your Bulletin Board

A DOZEN HINTS FOR SAFE USE OF PESTICIDAL CHEMICALS

1. READ LABEL...
2. STORE SAFELY...
3. DON'T SWITCH CONTAINERS...
4. NO SMOKING...
5. PROTECT YOURSELF...
6. DON'T SPILL TOXICANTS...
7. WASH THOROUGHLY...
8. COVER FOOD CONTAINERS...
9. DON'T CONFUSE WITH HERBICIDES...
10. DISPOSE OF EMPTIES...
11. REMEMBER RESIDUES...
12. CALL DOCTOR IF ILL...

Reprinted from Croplife, April 22, 1957

hanging on a bulletin board or as a mailing piece to be sent to farmers in the dealer's community. Single copies are free. A nominal charge is made for quantities. (Quantity prices will be furnished on request.) Check No. 6578 on the coupon and mail it to Croplife.

No. 6566—Nematode Chart

The Shell Chemical Corp. has available a nematode chart in black and white, 8½ by 11 in. The chart is available to those interested in nematodes. Secure it by checking No. 6566 on the coupon and mailing it to Croplife.

No. 5696—Conveyor

Details of a conveyor for conveying grain, chemicals, powder, liquids, scrap and other products have been announced by the R. T. Sheehan Co. Corrosive materials can also be conveyed by using stainless steel troughing buckets, according to the company. The length, width, and shape are adapted to suit the application.

The conveyor can be made portable or stationary and has a 14-in. minimum height from the floor. Company spokesmen claim that the elimination of troublesome hinges means savings in maintenance costs. Check No. 5696 on the coupon and mail it to secure complete details.

No. 6574—Power Sprayer

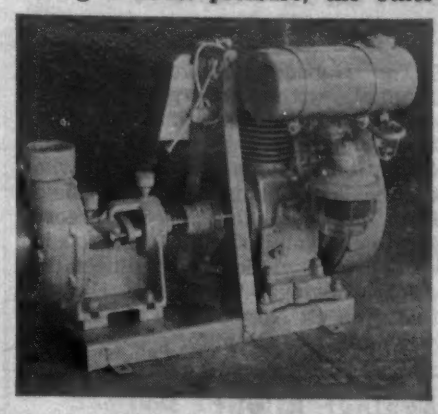
A new 3-gal. per minute "Mighty-Mite" power sprayer has been introduced by the F. E. Myers & Bro. Co. The sprayer is said to provide the benefits of boom spraying with up to a 21-ft. swath. Rough ground has little effect on the spray pattern of the sprayer, resulting in a uniform spray coverage, company officials said. The sprayer weighs approximately 40 lb. It is designed for 30 to 60 lb. operating pressure although the pump itself is capable of producing 300 lb. maximum pressure. Secure complete details by checking No. 6574 on the coupon and mailing it.

No. 6576—Insecticides Bulletin

A technical bulletin of information about its Perthane insecticides has just been issued by the Rohm & Haas Co. Designated by the company as a formulation and labeling guide, it is of interest to formulators of agricultural chemicals. The bulletin contains suggested labels, giving directions for use of the product in controlling cabbage loopers, cherry fruit flies, leafhoppers and other insects. Also included are suggestions for formulating technical Perthane into dusts, wettable powders and emulsifiable concentrates. This bulletin number AG-82 may be obtained by checking No. 6576 on the coupon and mailing it to Croplife.

No. 6569—Pump Units

The Nutra-Flo Liquid Fertilizer Equipment Co. is producing two pump units, one with a 2 h.p. motor capable of handling 50 gal. per minute and having a 50-lb. pressure, the other



with a 1½-in. pump and a 3½ h.p. motor capable of pumping 150 gal. per minute. Both can be used for pumping non-corrosive liquid fertilizer, water and other normal uses for pumps. They are specifically designed for pumping liquids heavier than water. The shaft on each is stainless steel and the housings are of iron. In the picture here a gasoline engine is direct-mounted. Electric motors may also be used. Secure complete details by checking No. 6569 on the coupon and mailing it to Croplife.

No. 6567—Weed Control

A new folder entitled, "Control Perennial Weeds and Grasses With Pennsalt Sodium Chlorate," has been produced by the Pennsylvania Salt Mfg. Co. of Washington. The product can be applied either as a spray or as dry crystals, states the folder. The product is packed in 100-lb. steel containers. The folder lists product description, general information, direc-

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A companion high nitrogen fertilizer for your quality mixed goods.

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DENVER, COLO.—*1375 Kearney Ave.*
DES MOINES, IOWA—*6th Floor, Hubbell Bldg.*
HOUSTON, TEX.—*1020 E. Holcombe Blvd.*
INDIANAPOLIS, IND.—*1112 N. Pennsylvania St.*
KANSAS CITY, MO.—*500 West 39th St.*
MINNEAPOLIS, MINN.—*212 Sixth St. South*
NEW YORK, N. Y.—*80 Broadway*
OMAHA, NEB.—*6th Floor, WOW Building*
PASADENA, CALIF.—*330 Security Bldg.*
RALEIGH, N. C.—*804 St. Mary's St.*
SALT LAKE CITY, UTAH—*68 South Main*
SPOKANE, WASH.—*521 E. Sprague*
ST. LOUIS, MO.—*4251 Lindell Blvd.*
TAMPA, FLA.—*3737 Neptune St.*
TULSA, OKLA.—*1708 Utica Square*
WICHITA, KAN.—*501 KFH Building*

tions for use, application rate charts and cautions in using the product. Secure the folder by checking No. 6567 on the coupon and mailing it to Croplife.

No. 6565—Spray Equipment

Details of its new "Field Master" line of spray equipment have been announced by the Broyhill Co. The line includes the model FM-1 boom sprayer, the model FM-2 boomless sprayer and the model FM-3 hand gun kit and boomless sprayer. The boom sprayer is a 6-row, 21-ft. "stainalized" boom with 13 "TeeJet" nozzles and 4-way hinge flexibility. The trailer is equipped with 15-in. wheels and two 55-gal. drums. A 115-gal. capacity steel or aluminum tank is optional equipment. Check coupon No. 6565.

No. 6571—Insect Spray Chart

The Hanson Equipment Co. has available, without charge, a file folder containing an identification insect spray chart. It contains up-to-date information on how to spray and what chemicals can be used to protect fields from crop-damaging insects, according to company officials. Common insects are listed along with illustrative color drawings. To secure the file folder check No. 6571 on the coupon and mail it to Croplife.

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NEW Chem-Bam with NABAM

only fungicide, liquid or otherwise, featuring

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exclusive sticking agent rain, watering won't wash away

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Full Promotional Backing For You!

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Another Croplife Service to the Dealer:
Clip Out This List of Names for Immediate Reference

POISON CONTROL CENTERS NEAR YOU

Below are listed poison information centers now in operation, along with the names of their directors and where they may be reached on an emergency basis, day or night.

Experts at these centers have been thoroughly trained in the toxicology of pesticides and are prepared to give accurate information on the course of action to be taken if local physician should be unavailable or unacquainted with antidote for specific pesticide.

Keep This List Handy Near Your Telephone!

FLORIDA

Daytona Beach, Halifax District Hospital, Joel V. McCall, Jr., M.D.
Ft. Lauderdale, North Broward General Hospital, John S. Fifer, M.D.
Ft. Myers, Lee County Hospital, A. Louis Girardin, Jr., M.D.
Gainesville, Alachua General Hospital, William Hadley, M.D.
Jacksonville, St. Vincent's Hospital, J. K. David, Jr., M.D.
Lakeland, Morrall Memorial Hospital, Walter Price, M.D.
Miami, Jackson Memorial Hospital, George Lister, M.D.
Ocala, Munroe Memorial Hospital, Harry M. Edwards, M.D.
Orlando, Orange Memorial Hospital, Charlotte Maguire, M.D.
Panama City, Memorial Hospital of Bay County, John J. Benton, M.D.
Pensacola, Baptist Hospital, Frank L. DeBusk, M.D.
Sarasota, Sarasota Memorial Hospital, Henry G. Morton, M.D.
Tallahassee, Tallahassee Memorial Hospital, George S. Palmer, M.D.
Tampa, Tampa Municipal Hospital, James M. San, M.D.
West Palm Beach, Good Samaritan Hospital, Lawrence R. Leviton, M.D.

GEORGIA

Savannah, U.S. Public Health Service, Wayland J. Hayes, Jr., M.D., 3-7741 (office) 2-7618 (home).

KENTUCKY

Louisville 2, School of Medicine, University of Louisville, William C. Adams, M.D., AM 1831

NORTH CAROLINA

Durham, Duke Hospital, Jay Arena, M.D., 9011

TENNESSEE

Memphis, East Memphis Children's Clinic, 4720 Poplar Ave., Albert M. Jones, M.D.
Memphis, Memphis Pediatrics Society, Le Bonheur Children's Hospital, 848 Adams Avenue, James Tuholski, M.D., JA 5-6541

TEXAS

Dallas, Southwestern Medical School, 2211 Oak Lawn Avenue, Kathryn Willis, M.D.

Next week Croplife will present a list of poison control centers in the states of Illinois, Indiana, Iowa, Michigan, Ohio, Oklahoma, and Wisconsin. These lists were compiled by the National Agricultural Chemicals Assn., 1145 19th St., N.W., Washington 6, D.C.

Good Production Practices Pay Off for Texas Cotton Grower

PLAINVIEW, TEXAS — A combination of cultural practices and farm chemicals has made farming more profitable for Frank Moore of Hale County, Texas.

Mr. Moore strives to get his cotton crop off to a good start and push it to maturity before the first killing frost. He plants as early as possible, then irrigates for a quick, early growth.

After the plants reach the four-leaf stage, he begins a seven-day spraying schedule and keeps it up for five weeks, or as long as needed. He checks the fields regularly for insects, because time poisoning not only keeps down damage but the cost is less.

He puts on nitrogen but not to excess. When the cotton is from 50 to 60% open, he starts defoliating and usually goes over the fields twice, using his own equipment.

When 90% of the cotton is open, which will be in about two weeks after defoliation, he sprays on pentaclorpenol at the rate of two quarts per acre. The cost of defoliating usually costs about $1 an acre.

At harvesting time, Mr. Moore doesn't worry about the high price of picking. He merely drives his mechanical harvester into the fields and strips the stalks.

Mr. Moore makes his biggest profit by getting the cotton in early before inclement weather damages the staple. He not only makes a larger yield, but also the cotton is graded higher. In 1956 only about 20% of his cotton was graded light spot, as compared with an average of over 47% for the Plains area. Since light spot brings several cents per pound less, his additional profit from each 500-lb. bale of cotton was considerable.

Many farmers in the area use some of Mr. Moore's methods, but hardly anyone uses all of them. He makes one of the highest yields in the county, and his profit per acre is probably also among the highest.

Adm. Lewis L. Strauss To Address MCA

WASHINGTON—Adm. Lewis L. Strauss, chairman of the Atomic Energy Commission, will be the principal speaker at the 85th annual meeting of the Manufacturing Chemists' Assn. to be held June 6-8 at the Greenbrier, White Sulphur Springs, W. Va. Admiral Strauss will address the more than 700 chemical industry executives at the annual banquet on June 7.

Speakers at the business meeting on June 6 will include Dr. Leland I. Doan, president, the Dow Chemical Co., Fred C. Foy, president, Koppers Co., Inc., and General J. E. Hull, USA (Ret.), MCA president.

Doing Business With

Oscar & Pat

Pat McGillicudy, as was his custom, came to work late that busy spring morning. In fact, it was about 10 o'clock, to be exact. Pat, to tell the truth, had been at a farm meeting the preivous night. He felt it his duty to attend these meetings, to know what problems farmers had, to mix with them and to sit around after the meeting, drinking coffee and eating doughnuts and talking about everything under the sun—even farming.

Now, as Pat put his hat on the wall rack and turned to his desk, his eyes widened. Oscar Schoenfeld, his portly, balding, frugal partner, was not there figuring discounts as usual, but what caught Pat's eye was a large eight ball, standing on the edge of Oscar's desk.

"Holy Mither of God!" he exclaimed. "What in the world have we got here?"

Tillie Mason, the plump bookkeeper who was inclined toward ulcers, and who had just about despaired of having her swain, bashful Dave Schuster propose to her, looked up from her desk.

"Don't get excited, Mr. McGillicuddy," she said. "That's an old globe Oscar picked up somewhere, had it painted black and then a big white '8' lettered on it."

"But why?" asked Pat. "That's a horrible looking thing, begorra."

"Take a look at the sign on the wall over his desk," Tillie pointed out. "That's new, too, since this morning."

Pat looked up and saw the sign. The copy read, in 6-inch high letters, "Silence Is Golden."

For a moment Pat stared at the sign and then at the huge, shining globe with the eight on it. Then he began to laugh. "You—you mean, he thinks he's so busy that he has to have things like that to tell people not to talk to him too much, to waste his time?"

"I—I think so. He was very pleased about it this morning. In fact, he walked about for perhaps 15 minutes to see how it looked in different positions on his desk."

"Oh, Heavens!" cried Pat irritably, "he is getting worse every day. I never knew a man who wasted so much time doing unnecessary things. He sharpens his pencils every day when he should have an automatic pencil and save time and steps. Then he picks up paper clips and puts them in that—that ridiculous bulldog paper clip thing. That glass bowl he used to put paper clips in, he now uses to put rubber bands in. How silly can a man get?"

Tillie Mason was staring at Pat, a frightened look on her face.

"He thinks he is working when he sits there at that desk and figures discounts over and over again," muttered Pat, still looking at the big eight ball. "He should quit some of that and be nice to customers, smile at them, chat with them, get to be their friends. I'll bet he hasn't got a friend in the whole county. They hate him, because he insults them so much. And the salesmen who call on us. They hate him even more, because he is so rude to them. Why, oh why, did I ever go into business with a partner like that?"

Tillie's face was now paper white and her right hand was covering her mouth. Something made Pat look toward the warehouse door office, and there stood Oscar, a toothpick in his mouth, his face white, his eyes narrow, his shoulders tight. Something told Pat that Oscar had been standing there some time, that Tillie's tense attitude had had something to do with Oscar's entrance, but he had not noticed it and just gone on berating Oscar.

"So you don't like it, McGillicuddy!" said Oscar in an Antarctic voice.

Pat's face was flushed a deep red. "Like it, I think it's terrible. What will the salesmen think? What will our customers think?"

"I don't care what they think!" snapped Oscar. "It's my desk. It's half my business. I like the eight ball and the sign. And it stays!"

Tillie started toward the warehouse door. "Go ahead and fight," she said nervously. "I'm going over to the Slide Inn for a cup of coffee. If you're not through when I come back, I'm goin' to quit. I—I'm gettin' sick of these fights all the time."

"Sick!" said Pat, after Tillie had gone. "She's not the only one. I'm sick of them, too."

"I was sick after the first day I was in business with YOU!" came back Oscar. "Ach, if you want to look at it one way, I have been in the hospital for years. And one of these days I am going to get out."

"And me, too," snapped Pat. "I am getting pretty fed up. What will our customers think of that sign and eight ball?"

"They waste too much time!" Oscar snorted. "Always they stand around there and say, 'Oscar, old boy, how are you doin'? Been behavin' yourself lately?' and all that silly stuff. You bet I behave myself. I behave myself so goot I got more money in the bank than four, five of them mouth-shooters put together. I tend to business, I do. When I work I work. I don't kill time, and I don't come to work at 10 in the morning, either. I'm here before seven."

"The time a man gets to work isn't important," Pat said. "It's what he does during the whole week that counts. I put in a lot of night hours, too, remember."

"Why don't you work in the daytime like the rest of us do?" asked Oscar nastily. "Let them learn to buy in the daytime. You make fun of me and my discounts. Well, did you get paid last week?"

"Sure I got paid."

"Well," barked Oscar, "it is that way because I watch the pennies. I don't let nobody get away with nothing on us. Ach, I even dream about our business."

Pat nodded a little absently. "And I go out and sell the business so you got some money to take from the cash register and put into the bank. Let's call it quits for today on the fighting, Oscar. Guess I'll join Tillie at the Slide Inn for coffee before I go to work."

"You don't come to work until ten, and then at 10:30 you go out for coffee yet!" barked Oscar, seating himself at his desk.

CHANGE ANNOUNCED—An agricultural research division has been created by Eli Lilly & Co., Indianapolis, and the above three men will play prominent roles in carrying out an expanded agricultural research program, according to Dr. T. P. Carney, vice president of research, development and control. Left to right: Dr. J. F. Downing, director of the new agricultural research division; V. A. Thomas, new head of the firm's Greenfield (Ind.) Laboratories administration department; and Dr. C. C. Leben, head of agricultural research at Eli Lilly & Co.

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FARM SERVICE DATA

Extension Station Reports

Potash applied to farm lands in Muhlenberg County, Kentucky, low in this element helped keep down weed content in a pasture experiment and also raised production of forage, says E. C. Doll, Kentucky Agricultural Experiment Station fertility specialist.

He tried potash applications on an orchard grass-tall fescue-ladino clover pasture mixture.

About 400 lb. per acre of muriate of potash raised forage production 2,700 lb. above the no-potash test plots, Mr. Doll said; likewise, higher potash applications tended to bring more clover and grass in the test fields, cutting weed and weedy-grasses content.

Phosphorus applications were made according to soil tests. No nitrogen was applied. Potash applications were varied, though, to check pasture responses. Results were as follows:

No-potash plots, 2,800 lb. of dry matter per acre in three cuttings, with about a third of this consisting of weeds, etc.; with 100 lb. of 60% muriate of potash, 4,300 lb. of dry matter per acre; 200 lb. of 60% muriate of potash, 5,300 lb. of dry matter; and 400 lb. of muriate of potash, 5,500 lb. of dry matter.

★

Grain sorghum can yield well despite little rainfall during the growing season—if the soil holds enough water at planting time, the U.S. Department of Agriculture says. Preseason irrigation or water-conservation practices that increase moisture storage will go a long way toward assuring good yields in semi-arid areas.

In cooperative experiments with the Kansas Agricultural Experiment Station at Fort Hays, Kansas, P. L. Brown, soil scientist of USDA's Agricultural Research Service, obtained grain yields averaging 37½ bu. per acre on plots that were wet at field capacity to a depth of 7 feet at the start of the season, but that subsequently received only 5.3 inches of water (rainfall) during growth.

The sorghum developed normally by sending down roots and extracting water at increasingly deeper soil zones as the season progressed. Roots drained each new zone of penetration to the wilting point in 2 or 3 weeks and ultimately picked up 16.4 inches of water.

★

Shade trees need a commercial fertilizer, balanced in nitrogen, phosphorus and potassium; and in many cases, small woodlands can benefit by similar treatment. This is the recommendation of Dr. J. B. Sharp, associate extension forester with the University of Tennessee.

Trees are starved on the average lawn, more often than not, Dr. Sharp said. He particularly disapproves manure applications about trees, since that material is short in the essential nitrogen, phosphorus and potassium. He advises commercial fertilizers, ranging from 6-12-12 or 10-10-10.

If it is too late to apply fertilizer in the early spring, Dr. Sharp said that late fall is the next best. He does not favor summer applications.

★

Excellent control of the tobacco flea beetle can be obtained by the proper use of insecticides, according to entomologists at the Pee Dee Experiment Station, Florence, S.C.

The tobacco flea beetle commonly referred to as the "flea bug," is a small, brownish, hard-shelled beetle. During the past few years it has caused serious damage to newly set tobacco plants in South Carolina. The beetles usually appear on plants as soon as they are set in the field. Unless they are controlled 8 to 10 beetles per plant will ruin the small tobacco plants.

While excellent control of the beetles can be obtained in the field, entomologists recommend dusting the plants in the bed a day or so before they are to be transplanted to the field. This practice will reduce the damage to newly set plants.

★

Texas A&M agronomists say that farmers can trade four pounds of nitrogen for an extra bushel of corn with applications of 60 lb. an acre on the sandy soils of the Texas Gulf Coast if proper amounts of phosphorus and potassium are also applied.

Good management and fertility practices are essential for profitable corn production in this area, emphasize the specialists. A balanced fertilizer supplying 60 lb. an acre of each main nutrient will produce an average annual yield of more than 60 bu. on each acre containing at least 8,000 plants. Recommendations say the nitrogen should be applied in split applications, with half at or before planting and the rest as a side-dressing when corn is about 5 weeks old. Spacing plants 13 to 20 inches apart on 40-inch rows will produce 8,000 or more plants to the acre.

A three-year average response to 60-pound applications of nitrogen per acre was approximately 16 bu. of corn on Hockley fine sandy loam at Prairie View. Corn response from 60 additional pounds of nitrogen or a 120-lb. per acre total was 7 bu.

★

Florida orange and grapefruit growers have spent an average of 36¢ out of each dollar of operating costs for soil enrichment over the past 24 years, according to a survey conducted by Zach Savage, Florida Agricultural Experiment Station.

Annual fertilizer costs to the growers ranged from $17.74 an acre in 1933-34 to $66.43 in 1954-55, according to the study.

While money spent per acre by the growers for fertilization has increased 160% over the period studied, price of fertilizer increased only 50%. Farmers have been using more fertilizer and fertilizer with larger amounts of the main elements and with a larger number of elements

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1. Standard 60% K_2O Muriate of Potash for mixed fertilizers.
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3. 50 to 52% K_2O Sulphate of Potash for *premium* mixed fertilizers.
4. SUL-PO-MAG (22% K_2O—18% MgO)—premium potash and water-soluble magnesium for *premium* mixed fertilizers.

You can get *all four* of these products, for all your potash needs, from *one source* of supply. Other advantages: uniform quality in every pound; time-saving convenience in ordering and scheduling, and personalized sales and service from experienced people at your nearest district sales office:

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CHICAGO, ILL.— 20 North Wacker Drive, C. E. Martin, *District Sales Manager.*

NEW YORK, N. Y.— 485 Lexington Ave., W. W. Chadwick, *District Sales Manager.*

SHREVEPORT, LA.—418 Market St., J. K. Lindsey, *District Sales Manager.*

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What's Been Happening?

This column, a review of news reported in Croplife in recent weeks, is designed to keep retail dealers on the regional circulation plan up to date on industry happenings.

The planting of substitute crops by signers of soil bank contracts was seen by Washington observers as being the basis of added income for such farmers. This in turn was regarded as offering a potential market for plant food and pesticides.

The National Plant Food Institute, Washington, D.C., took initial steps to show how the use of fertilizer for the establishment of turf and shrubbery along the nation's new 41,000 mile highway system, would be an asset. Estimates of how much fertilizer would be required for such a program ranged from 250,000 tons to 400,000 tons. An additional 125,000 tons a year would be needed for maintenance, it was estimated.

Ezra Taft Benson, secretary of agriculture, in a letter to Sen. Allen J. Ellender (D., La.), chairman of the Senate committee on agriculture, said that the nation's farm support programs are not working. He told Sen. Ellender that surplus stocks are being reduced, but efforts must be made to see that "granaries and warehouses presently being emptied are not filled with price-depressing surpluses."

Pilot-type tests for screw-worm eradication in Florida began in a 2,000 square-mile area of that state. Basic techniques used successfully to wipe out the pest on the Caribbean island of Curacao in 1954, will be employed in the Florida tests. Male flies rendered sterile by radiation, reduce greatly the population of screw-worms over a period of time. This method is expected to bring results in Florida.

Construction of a $5 million chemical plant was to begin at Port Maitland, Ontario, Canada, the Electric Reduction Co. of Canada announced. Phosphoric acid will be produced by both electrochemical and wet processes.

Construction has begun on the new fertilizer-insecticide plant at Sunnyside, Washington, for Pacific Agro Co., Seattle. The new plant was expected to be completed in time to supply both dry and liquid insecticides to growers during the 1957 season.

Potash deliveries for agricultural purposes dipped slightly during the first quarter of 1957, the American Potash Institute reported. The tonnage for the first quarter was 581,689 tons K_2O as compared to 599,643 tons K_2O during the first quarter of 1956.

Stauffer Chemical Co. installed a new unit to produce granular insecticides, at Omaha, Neb. Granular formulations of DDT, aldrin and heptachlor will be made at the plant.

Confidence in the current farm program was reported in Washington to be fading. The soil bank, it was pointed out, has not been able to reduce surpluses.

A new urea plant was brought into production by Shell Chemical Corp. near Ventura, Cal. It makes high analysis nitrogen products. Shell said that this plant is the only one of its type west of the Rocky Mountains.

Establishment of California Chemical Co. was announced by Standard Oil Co. of California. The function of the new company was to consolidate the chemical activities of Standard. The new organization will coordinate the activities of two Standard subsidiaries; California Spray-Chemical Corp. and Oronite Chemical Co.

Last year's agricultural loss attributed to corn borers is estimated by USDA at $119.5 million. This represents about 3% of the total corn crop. Despite the heavy loss in 1956, it was less than that of the previous year when 155 million bushels of corn were lost. The 1956 loss was 98 million bu.

That microorganisms in a cow's rumen may be able to detoxify some insecticides, thus making them harmless, was suggested by the results of experiments conducted by the University of Wisconsin. It was pointed out that if further research bears out these early findings, it could mean the removal of a hurdle standing in the way of approval of certain systemic organophosphate insecticides on forage crops. It might also mean that several presently-used insecticides can be used on forages with fewer precautions as to spraying date.

Dr. Firman E. Bear, retired head of the soils department at Rutgers University, New Brunswick, N.J., told the fifth California Fertilizer Conference at Fresno that the long-term prospects for feeding the expanding population of the U.S. is good. The application of plant food materials plus widespread irrigation can compensate for the increasing numbers of people in the nation, he said.

An explosion and fire at Monsanto Chemical Company's Nitro, W.Va. plant resulted in five casualties and the hospitalization of a number of additional persons. Financial loss was estimated at $1 million. The plant's production of methyl parathion insecticides will be halted for several months and of ethyl parathion for as much as six weeks.

Consumers Cooperative, Kansas City, Mo., bought a 40% interest in Missouri Farmers Assn.'s ammonium phosphate fertilizer plant at Joplin, Mo. Annual capacity of the plant is set at 70,000 tons. A pipeline connects it with a sulphuric acid plant owned by Eagle-Picher Co. at Galena, Kansas.

Coastal Chemical Corp. announced that it will construct a sulfuric acid plant at Pascagoula, Miss. as part of its fertilizer installation under construction.

The U.S. Department of Agriculture announced results of experiments with its new herbicides, 4(2,4-DB) and 4(MCBP), both of which demonstrated value as supplements to herbicides presently in use by farmers. In tests made in 1955 and 1956, the new materials were used for weed control in seedling legumes and certain other crops.

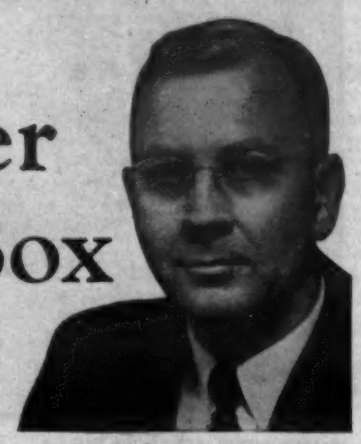
Gibberellic acid materials were tested by the New York Agricultural Experiment Station, Ithaca, N.Y., to stimulate the growth of red kidney beans so they may be harvested in a single operation. Success of the technique would aid in mechanical harvesting methods which in turn are more economical than other means.

Advertisement

The Bulletin Board

No. 25 in a series from the Spencer Chemical Magazine, "Today's Fertilizer Dealer"

The Spencer Question Box



Edited by

Proctor Gull

Chief Agronomist, **Spencer Chemical Co.**

"The Question Box" is one of the most popular features of TFD, Spencer Chemical Company's magazine for fertilizer dealers. Questions submitted by dealers are answered by Proctor Gull, head of Spencer's 7-man field agronomy team. Here are a few timely questions and answers from recent issues of TFD.

1. QUESTION: Should nitrogen sources be considered on a bag-for-bag basis or on a pound-for-pound of actual N basis?

ANSWER: In a recent article, Ralph Wehunt and P. J. Bergeaux, Soils and Fertilizer Specialists for the University of Georgia College of Agriculture, had this to say about the comparison of nitrogen sources:

"Many long-term studies have been conducted on the major nitrogen sources used by farmers. Results obtained from these experiments show that, pound-for-pound of actual nitrogen, one material is as effective as another for the production of most crops, provided lime and potash are not limiting factors. Therefore, selection of a source should generally be based on cost-per-pound of nitrogen and the cost and availability of equipment for application. There are, however, certain management practices that influence the crop response obtained from different nitrogen fertilizers.

"The most logical method to compare nitrogen fertilizers is on a pound-for-pound of actual nitrogen basis. A bag-for-bag evaluation, unless each bag contained the same amount of nitrogen, would lead to false conclusions . . . In summary, bag-for-bag nitrogen tests can be misleading to a person not familiar with the influence of nitrogen on plant growth. The only fair method of checking nitrogen fertilizers is on a pound-for-pound actual nitrogen basis. It is true that under certain soil and climatic conditions, one nitrogen source may out-produce another. But most of the observed differences in yield can be explained by certain basic factors. Some of these factors, which govern the behavior of nitrogen fertilizers in soils and plants, are: (1) loss by leaching from the soil, (2) mobility or immobility in the soil, (3) effect on soil reaction and other soil properties, (4) content of secondary elements, (5) effect of soil reaction on availability and (6) form of nitrogen required by plants.

"However, with proper adjustments in the time of application and with a sound soil fertility program, including adequate lime, these factors can be largely overcome. When this is accomplished, research has clearly shown that, pound-for-pound of actual nitrogen, one nitrogen fertilizer is as effective as another for the production of most major crops grown in Georgia. Therefore, farmers should be encouraged to purchase nitrogen on a cost - per - pound - of - element rather than a cost-per-ton-of-nitrogen carrier basis."

2. QUESTION: Do grain sorghums respond to fertilizers the same as corn?

ANSWER: Grain sorghums are similar to corn in their needs for and in their response to fertilizer. If you are raising sorghum on land that has been cropped the previous year, you will want to use a row fertilizer at planting time, as well as supplemental nitrogen.

The best way to determine your needs would be to have a soil test taken. Without a soil test, a general recommendation would be about 300 pounds of 6-10-10 at planting plus a side-dressing of about 200 pounds of ammonium nitrate. The amount of supplemental nitrogen to use on grain sorghums is not as high as for corn. It would not be advisable to go above 75 pounds of actual nitrogen per acre with grain sorghums.

Spencer Supplies the Nitrogen

To Fertilizer Dealers ONLY

SPENCER CHEMICAL COMPANY
609 Dwight Building
Kansas City 5, Missouri
Gentlemen: I am a fertilizer dealer not presently receiving **Today's Fertilizer Dealer magazine.** Please send me a free subscription without obligation.

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Firm.....
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WINDOWS WHICH SELL—A fairly complete fertilizer sales story is told in the display windows of the G. W. Ponder Co., Cullman, Ala. E. Daniels, manager of the firm's fertilizer sales, believes that window lettering should have a "professional" appearance. A careless job can ruin an otherwise excellent display window, he claims.

Make Personal Calls to Sell More Fertilizer, Alabaman Says

By AL. P. NELSON

Two salesmen who visit farmers in the area from January through May help the G. W. Ponder Co., Cullman, Ala., sell more than 5,000 tons of fertilizer annually. Most of it is for use on corn and cotton, as well as potatoes and a few vegetable crops, reports E. Daniels, manager of fertilizer sales.

The firm finds that there is no substitute for personal calls on farmers, large and small, during the period of year when they are thinking about the planting season. The salesmen circulate in rural areas, putting in long hours, discussing soil needs and crop methods with farmers, and they usually wind up coming back with sizable fertilizer orders.

"Farmers in this area are gradually increasing their use of fertilizer, for they can see on every hand how fertilizer boosts crop yields," states Mr. Daniels, "and we try to drive home this story with our advertising, both newspaper and radio."

The company advertises on two local radio stations in the spring of the year, sometimes using as many as five spots daily. These radio stations have a fine rural audience, and such advertising brings in many customers and also aids the field salesmen in their work.

In such spots, the copy usually stresses the beneficial results of good fertilizer based on soil needs, and also points out the trend toward using higher analyses fertilizer in many areas.

In this part of Alabama many farmers use 4-10-7 and 4-12-12 on their cotton. Just about the same analysis fertilizer is used on potatoes, states Mr. Daniels. On corn 6-8-4 and 4-10-7 are used, while on peppers, a favorite local crop, 4-12-7 and 4-12-12 are in considerable demand. Farmers in this part of the state practically sidedress all their crops, Mr. Daniels says.

The average size farm in the region is about 80 acres. In addition there are many-acre and 5-acre plots of ground planted to crops by homeowners who have factory or town jobs, and who farm "on the side."

Mr. Daniels says that county agent and extension workers are doing an excellent job in this area in telling the farmer the fertilizer story. It is tied in with soil conservation, and rare is the farmer who has not attended several of these meetings each year. Such educational work lays the basis for better soil management, states Mr. Daniels. Such a farmer readily accepts the fact that proper fertilization of land is just as important as good seed and proper cultivation.

The Ponder firm also operates a cotton gin and store in Cullman and thus has many additional contacts with farmers. This helps in the selling of fertilizer. Farmers who bring their cotton here to be ginned naturally buy a large share of their fertilizer here, too.

The Ponder firm makes excellent advertising use of its windows. Each of three sections of a large window is lettered with copy which explains "three great, different fertilizer formulas." The "plus" factors in the fertilizers are also shown on window copy.

Customers who walk by can still look into the salesroom, for plenty of window space has been provided for this. And yet the window selling copy stands out plainly, too.

A professional sign painter was hired to put the copy on the window glass and this accounts for the neat professional appearance. Hand lettered copy by an untrained person could ruin the effect of a good window sales story, believes Mr. Daniels.

The store also sells a lot of insecticides for cotton, corn and other crops, and this volume takes up the slack when the spring fertilizer volume tapers off.

"We find our customers more fertilizer and insecticide conscious than in former years," says Mr. Daniels. "I believe a great deal of this can be traced to the good educational and research work done by everyone in the industry."

Corporation Changes Name

NEW YORK—U.S. Industrial Chemicals Co. has announced a change in the name of its parent organization, known up to May 1, 1957, as National Distillers Products Corp. It is now known as "National Distillers and Chemical Corp." The new name will be used for general corporate purposes, and the chemical business will continue to be conducted under the divisional name of U.S. Industrial Chemicals Co. Headquarters of the corporation are at 99 Park Ave., New York 16, N.Y.

RINGING THE CASH REGISTER

Let Them Handle It

Volume selling of fertilizers and farm chemical products does not rely on high pressure sales techniques or tricky promotions loaded with gimmicks. To the contrary, a good product will be a good seller if simple, basic rules of display and product information are followed. This means the prominent placing of a product where the customer is attracted to it, where he can see it and reach for it. Information telling what the product is, what it is used for and how it is used should be part and parcel of the display. Last, but certainly not least, the price of the product should be readily visible to the customer.

Who Should Get Credit?

The urge or pressure to sell on credit terms or "put it on the book" is strong. If other firms are granting credit it is hard to lose sales. If competition comes from a low margin, big volume cash competitor, the urge is strong to grant a credit service not offered by the cash house. A credit business can be handled successfully, but before the decision is made to extend credit, ask yourself two questions, points out a publication of Dun & Bradstreet, Inc. (1) Do I have enough capital? Roughly an additional capital investment equal to 1½ months' credit sales is needed if selling terms are 30 days. For example, if a store is doing $3,000 a month cash, and this is shifted to credit terms of 30 days, $4,500 additional capital is needed to maintain a comfortable operation. Even if collections are made reasonably promptly about $4,000 or $4,500 will appear as a new accounts receivable asset in your statement. (2) Do I know how to collect? Credit granting and collecting demand skill. Judgment is needed in opening the credit account, and firm persistence in getting the money is a must. Some people don't have the skill.

TVA Schedules Pilot Plant Demonstration

MUSCLE SHOALS, ALA.—A pilot-plant demonstration of some of the latest developments in fertilizer technology of the Tennessee Valley Authority's Office of Chemical Engineering will be held June 18-20, it has been announced here. The demonstration will be held at the Wilson Dam Laboratories near Sheffield, and will center around use of the TVA-developed continuous ammoniator.

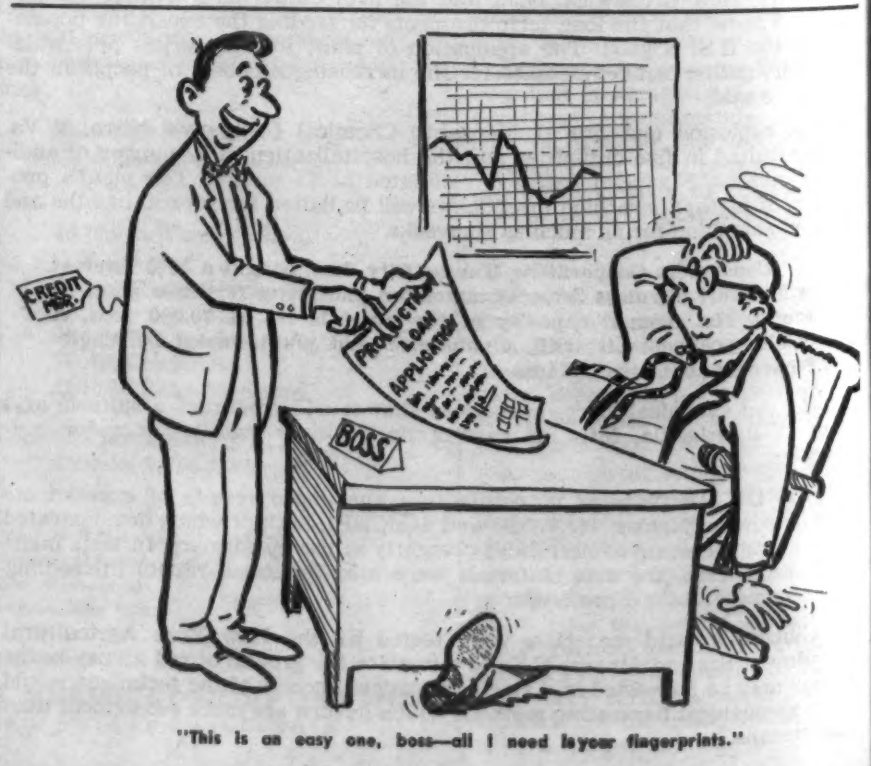
A series of pilot-plant runs will be made, each designed to illustrate a different process or the use of new combinations of raw materials. All members of the fertilizer industry, the press, and other interested persons are invited to attend.

Tours will be arranged for those wishing to see the TVA fertilizer manufacturing facilities and the chemical and agronomic research laboratories. Those planning to attend the demonstration are requested to notify J. H. Walthall, director of chemical development, Tennessee Valley Authority, Wilson Dam, Ala. Members of the press should contact Paul L. Evans, director of information, TVA, Knoxville, Tenn. Each pilot-plant demonstration will be preceded by a discussion period of about 45 minutes.

Ross Cooper Named Kansas Plant Manager

CHANUTE, KANSAS — Directors of Neosho Fertilizer, Inc., Chanute, have announced employment of Ross Cooper as manager of the firm's plant on the southwest outskirts of Chanute. He has taken over the post upon completion of his duties as city manager May 15.

Mr. Cooper was active in organizing the fertilizer company which was set up in March, 1953. He has been a member of the board of directors since the time of the firm's establishment. The fertilizer plant is now under an expansion program that includes remodeling for increased capacity and construction of a brick addition on the north side to enlarge storage space.



"This is an easy one, boss—all I need is your fingerprints."

SOIL BANK

(Continued from page 1)

This group has summoned Mr. Benson to appear before it to explain his farm policy ideas. Previously he rejected presentation of a broad new farm policy in a letter replying to Sen. Allen J. Ellender (D., La.) who asked the same question which Harold D. Cooley (D., N.C.) chairman of the House agriculture committee plans to ask the Secretary.

Mr. Cooley, after the House vote on the acreage reserve payment provisions, said that his committee could reinstate this section of the appropriation bill if Mr. Benson could convince them on this issue. The Democratic majority which enacted the soil bank bill last year is still smarting under the method in which it was administered; wherein heavy payments became available to the corn belt last year in the acreage reserve program. The Democrats charge that the Benson administration used the soil bank bounty as a vote-buying device last year prior to the national elections.

At best the soil bank has been little more than a political football, attractive only to the person having the ball. It has fallen short of its goal. Even now in its second year there is little reason to believe that it will make any overall dent in the government surpluses of feed grains or for that matter of wheat.

On the other hand, its political attraction has now fastened itself onto other crops such as potatoes where influential congressional sources are bidding for the inclusion of that crop in the soil bank next year.

The soil bank is a poor road to agricultural efficiency—it becomes daily more and more of a bounty to farmers, through which they can collect double payments through the soil bank and cash from crops grown on land taken out of basic crops acreages eligible for the acreage reserve phase of the soil bank.

The farm leaders in the political ring preach farm efficiency as a means of reducing the squeeze on the farmer, but they fail to put into practice what they advocate.

The efficiency target, it is stated by influential farm economists, is a maximum outturn of units of crop per acre under the best of farming practices.

That can mean little less than adequate use of plant foods and pesticidal chemicals in growing crops on the best land and a turning back of fringe, marginal or poor land to cover crops and pasture where again the plant food and pesticidal chemical industry can make a major contribution to maximum production of those crops. These in turn may be eventually used for the production of livestock for a rapidly expanding population.

Senate action on the House defeat of the soil bank acreage reserve program is uncertain. Surely sincere budget cutters in the senior chamber will embrace the House move, but on the other had with both parties split on the farm issue and Secretary Benson's policies the target of the GOP in the farm belt, this issue is certainly in doubt. The ultimate decision may rest on the public reaction to the President's appeal to back his budget.

First reaction to the House action were howls of dismay forecasting big declines in commodity prices. Such complaints are hardly reliable or sincere and should be dismissed as false alarms.

But the solid base of the soil bank philosophy has been shaken and there is little reason to believe that any industry planning a full year ahead should count on the soil bank bounty payments to the basic crops as actual buying power.

Test of TVA Fertilizer Program Under Way

LOGAN, UTAH—A survey to find out how beneficial TVA high analysis phosphate and nitrogen fertilizers have been to Utah farmers who have used them since 1950 is now being conducted by Utah State University.

Ben W. Lindsay, Heber City, senior in agronomy, and Brooks H. Poulson, Richfield, graduate student in agricultural economics, have been assigned to interview the 107 farmers involved.

Prof. Leon C. Michaelsen, USU farm management specialist, said that on many of the farms test plots have been established to study different combinations of fertilizer and various rates of application. The object, he said, is to determine the most economic rate of application, and to test the life of the fertilizer. Most of the test plots have been set up on alfalfa or pasture land.

The two USU students also will study the USU Extension Service "Better Farming For Better Living Program," underway since 1954. Under this program, extension service agents and specialists guide selected farm families in analyzing their needs and hopes and setting up long-range programs to achieve specific goals.

Expected Montana Purchases Forecast

SAN FRANCISCO — Montana farmers will buy an estimated 1,382,400 lb. of insecticides for crops during 1957, according to an estimate of the Montana Farmer-Stockman. Some 8,000 farm families will buy this item at an average rate of 172.8 lb.

These families will also purchase more than 150,000 tons of fertilizers during the year. Solid or dry fertilizers are more popular than liquid or gas, according to the Farmer-Stockman survey, completed recently.

Jack P. Taylor in New Post with ACP

AMBLER, PA.—Jack P. Taylor has been promoted to manager of industrial chemicals sales, a newly created position in the agricultural chemicals division of the American Chemical Paint Co., Ambler, Pa. He was previously assistant to the sales manager of the same division, M. B. Turner, and specialized in industrial brush control chemicals. Mr. Taylor joined the company in 1951, as sales representative in the Southeast. He was transferred to the Ambler offices in 1952.

LEASE APPROVED

LOS BANOS, CAL.—Directors of the Central California Irrigation District have approved the lease of a strip of district property along the Main Canal near Crows Landing for use as a landing field for aircraft workers and crop dusters spraying nearby fields.

FROM Abbott LABORATORIES

GIBBERELLIC ACIDS

now available in commercial quantities!

● Gibberellic Acids, the amazing plant growth stimulants, are *now available* in commercial quantities from Abbott Laboratories—a major producer of fermentation products.

Abbott Gibberellic Acids . . . for optimum plant response . . . are shipped in crystalline form ready for commercial formulation. The potency of this plant growth stimulant has been demonstrated on many plants using a dilute solution of only a few parts per million.

Gibberellic Acids on African Violets (and many other plants, ornamentals and trees) give up to three times faster growth and earlier flowering. For technical assistance in the use of Abbott Gibberellic Acids write to Chemical Sales Division, Abbott Laboratories, North Chicago, Illinois.

Increased growth, faster germination, earlier flowering, and release from dormancy are only a few of the benefits of this amazing product.

Now that you can get Abbott Gibberellic Acids, you can make the most of the growing demand among florists, commercial nurserymen and growers, and home flower gardeners. (It is expected that demand will be even greater when further research makes it possible to use Abbott Gibberellic Acids on feed, food and fiber crops.)

Technical Consulting Service: If you wish special assistance or technical aid to get your product on the market with minimum delay, a special Technical Service Representative from Abbott will be glad to help you on formulation or other problems.

For full details immediately on Abbott Gibberellic Acids including prices, availabilities, and technical data . . . write to Abbott Laboratories on your company letterhead, or call DExter 6-3080.

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IMPORTED FIRE ANT

(Continued from page 1)

ant. Methods of application recommended by department entomologists include spot treatment of individual mounds in small areas or where infestation is light, and area spraying or dusting with a boom rig where a large acreage must be covered. The possibility that a granular poison can be distributed by airplane in a large scale control campaign has been mentioned.

The imported fire ant, which is said to have gained a foothold near the port of Mobile, Ala., about 25 years ago, has begun to spread more rapidly as its numbers increase. Harold D. Cooley (D., N.C.), chairman of the House Agriculture Committee, believes that "immediate action is warranted" and relays the warning of USDA experts that the ant otherwise may soon become a menace to all agriculture in the country.

The imported fire ant is called the imported ant because it is believed to have been brought in from Argentina. It is called the fire ant because of its fiery sting, which may cause a tiny, festering wound that remains for several days. It is a dark red ant growing to about a quarter of an inch in length and is distinguishable to the laymen chiefly by the fact that it is a mound builder.

It does not tunnel into the earth and pile dirt around the opening of its nest as most ants do, but actually builds a large mound which is the above-ground half of a huge ant city. Undisturbed, these mounds may reach the size of a bushel basket in a few months time, each containing many thousands of ants.

One of these mounds observed in St. Landry Parish, Louisiana was about two and one-half feet high and five feet in diameter at the base. In a heavily infested area, there may be 50 to 100 mounds to the acre, with a total population of perhaps a million or more.

Some fantastic stories have been circulated concerning the poisonous nature of the fire ant sting. It might be described as more painful than the sting of a mosquito, but it does not cause swelling or itching for any length of time. There have been reports of small children requiring hospital treatment as the result of numerous stings. A mass attack by any of several other large ants might be equally serious, but no other ant appears to have become even a tenth as numerous as the fire ant in areas it has infested.

In Louisiana, one of the more heavily infested states, Kirby L. Cockerham, Agricultural Extension Strvice entomologist, says that the fire ant is considered a menace to the newly born young of livestock and is thought to prey on the young of small game and low-nesting birds. It attacks certain crops such as okra, cabbage and germinating seed corn and is believed to damage pastures by carrying off great numbers of seeds.

Where it is present in numbers it may interfere with the harvest of a crop. Its large mounds, which become overgrown with grass, make pasture mowing and the harvesting of seed crops difficult. The ant interferes with grazing because it is feared by livestock. The ant with its mounds will deface a lawn in a short time. It is a serious pest to nurserymen.

Dr. M. B. Clarkson, deputy administrator of the Agricultural Research Service, describes the ant as "a major pest of improved pastures." Mr. Cockerham reports that one Louisiana cattleman this year is spending $4,000 or more to free a 1,000-acre pasture of fire ants, with the expectation that the treatment will last for only about two years before the ants move back in.

Mr. Cockerham and Dr. L. D. Newsom, entomologist with the Louisiana State University Agricultural Experiment Station, point out that a very intensive campaign will be needed to stamp out the ant since it is found everywhere in infested areas and even a few hidden nests missed in the campaign would soon mean reinfestation. Alabama Polytechnic Institute has sent entomologists to Argentina to study control measures used there.

The Agricultural Experiment Station and the Agricultural Extension Service in Louisiana now recommend for area control application of about two pounds of dieldrin-heptachlor to the acre, as a dust or in granular form; the application of about two pounds of aldrin in the same form, or the application of about four pounds of chlordane in spray form.

FIRE ANT OUTBREAK — Southern states are being alerted for a multi-million dollar campaign to control the imported fire ant. The top photo shows a spray rig which can be used to apply control chemicals in the fight against the pest. Center, Murphy Veillon, Vermillion Parish, Louisiana county agent, shows the size of a grass-grown imported fire ant mound. Below is a severely infested field in Avoyelles Parish, Louisiana.

Crop Prospects Look Good in Oregon

PORTLAND, ORE.—Last week's warm weather allowed Western Oregon farmers to make progress with field work that was retarded earlier. Eastern Oregon grain crops were favored by good growing weather during the period and winter wheat reached the "jointing" stage. Crop prospects were considered good to excellent in the main producing districts.

Western Oregon seeding of spring wheat was nearing completion and probably less than one fourth of the spring oats and barley remained to be seeded by the end of the week.

Warmer temperatures and added sunshine brought about good development in Western Oregon pasture and hay fields. Limited frost damage on April 25 to the Southern Oregon Bartlett pear crop is now apparent. Willamette valley strawberries and caneberries are in good to excellent condition and making a rapid progress towards an early harvesting date. Planting of snap beans and sweet corn for processing got underway in many localities.

Prospects continued favorable for Umatilla County processing peas. Eastern Oregon spring grain plantings made good progress during the week and potato planting started in central Oregon.

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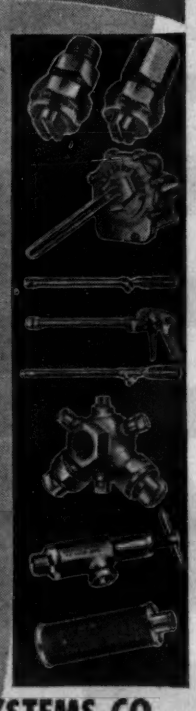

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TEEVALVE selector valve for booms... Bulletin 84.

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PRESSURE RELIEF VALVES Bulletin 83.

SUCTION STRAINERS AND ACCESSORY EQUIPMENT Write for Bulletin 85 and Catalog 30.

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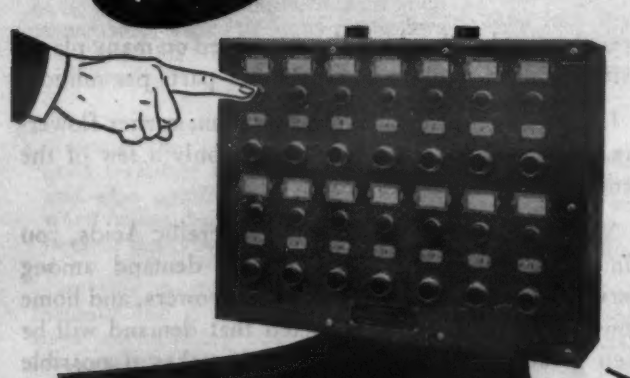
3214 RANDOLPH ST. • BELLWOOD, ILLINOIS

NOW PUSH BUTTON CONTROL
FOR DISTRIBUTION OF FERTILIZER



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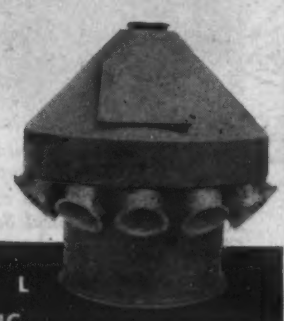
H S Electronic Distributor

CAN BE CUSTOM-BUILT IN ALL SIZES TO FIT YOUR PLANT NEEDS

Extra monitor panels are available to allow for check on settings from anywhere in your plant.



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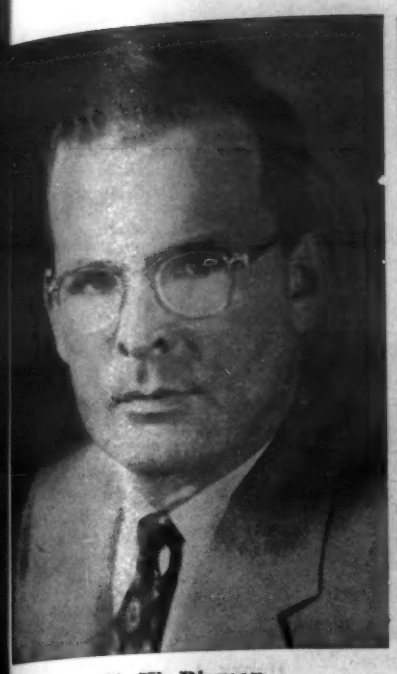

W. W. Dipman

TO DIRECT RESEARCH — Union Bag-Camp Paper Corp. has announced the appointment of William W. Dipman, a member of the Union Bag organization since 1947, as director of market research and development. Mr. Dipman has served as sales representative and district manager for the company's multiwall bag division. He was, at the time of his appointment, assistant to the vice president in charge of bag sales.

Alabama Agronomist Urges Use of More Nitrogen on Cotton

AUBURN, ALA.—Jasper Jernigan, Alabama Polytechnic Institute extension agronomist, states that Alabama farmers "lose money every year" by missing out on extra profits they might expect from use of sufficient nitrogen on their cotton crops. He has urged farmers to sidedress cotton plants with enough nitrogen to "stop this waste of profits."

Mr. Jernigan pointed out that cotton grown in most parts of the state calls for a total of 60 lb. of nitrogen per acre to make highest yields.

Exceptions are the fertile red soils of the Tennessee Valley, where only 36 lb. of nitrogen are needed per acre, and on Sand Mountain, where 75 lb. are needed for cotton planted on the recommended date.

To show the difference nitrogen can make to cotton yields, Mr. Jernigan cited Alabama figures published in a bulletin entitled "Fertilizer Use and Crop Yields in the U.S." These data showed that with 10 lb. of nitrogen per acre cotton yields ran to only 315 lb. per acre; 20 lb. of nitrogen boosted yields up to 372 lb.—an increase of 57 lb.; 40 lb. of nitrogen made the yields leap to 455 lb.—an increase of 83 lb.; and 60 lb. brought the yield up to 500 lb. an acre.

CENTIPEDE GRASS DAMAGE

CHARLESTON, S.C.—Damage to centipede grass is of considerable concern to home owners in the South Carolina coastal area, reports Dr. W. C. Barnes, superintendent of the Clemson College experiment station here. Dr. Barnes speculates that starvation of grass, excessive soil acidity, damage by ground pearls and nematodes, overwatering, or possible attacks by a soil fungus may be the cause, in combination or singly. He has suggested appropriate fertilization or treatment with nematocides, fungicides, or other preparations.

FERTILIZATION RATE

STATE COLLEGE, MISS. — Best fertilization rate for sweetpotatoes in Mississippi is 40 lb. of nitrogen, 80 lb. of P_2O_5 and 80 to 120 lb. of K_2O, according to tests conducted by the Mississippi State College truck crops branch station.

Nitrogen Boosts Irrigated Coastal Bermuda Yields

COLLEGE STATION, TEXAS—Coastal Bermudagrass under irrigation must have heavy applications of nitrogen to obtain maximum return on costs for irrigation.

Tests at the Texas Agricultural Experiment Station at Crystal City produced 26,600 lb. of air-dry forage an acre after 600 lb. of nitrogen (1,800 lb. of ammonium nitrate) per acre compared with only 5,770 lb. of air-dry forage per acre where nitrogen was not applied.

On dryland production yield ranged from 1,070 lb. where nitrogen was not applied to 4,340 lb. per acre where 60 lb. of nitrogen was applied per acre per year, Richard A. Schwartzbeck, assistant agronomist at the station, said.

The greatest return for each dollar of cost was application of 240 lb. of nitrogen per acre under irrigation per year, he pointed out. However, the maximum net return was obtained with 600 lb. of nitrogen per acre.

The tests were begun in 1955 and at the end of a two year test period root systems under the six levels or amount of nitrogen applied to different plots were checked for penetration and development.

No appreciable difference in development was noticed under various amounts of nitrogen applied, and none of the roots penetrated the hardpan layer of soil about eight or ten inches under the surface.

PROBABLE PLANT DISEASES

ST. PAUL — Important plant diseases that are apt to show up in Minnesota this year are stem and crown rust in oats, leaf spots in alfalfa, stalk and root rot in corn, spot blotch and septoria in barley and seedling blight, heat canker and pasmo in flax, according to Herbert Johnson, extension plant pathologist at the University of Minnesota.

American Potash Starts Company Safety Contest

LOS ANGELES—American Potash & Chemical Corp has inaugurated a company-wide safety contest in which the various AP&CC facilities will compete for a newly-established President's Trophy.

The contest was formulated under the sponsorship of Peter Colefax, AP&CC president, to continue the company's outstanding improvement in safety during recent years, according to an announcement by Robert B. Coons, vice president, administration.

The contest will be conducted on a quarterly basis among various AP&CC facilities located at Los Angeles, Trona and Whittier, Cal., San Antonio, Texas, and Henderson, Nevada, with the winner being presented the President's Trophy. Judging will be done on a point system including such points as calendar days worked, man hours, frequency rate, severity rate and others.

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POTASH SHAFT

(Continued from page 1)

proved of higher grade than that in New Mexico. It is 3,000 feet below the surface and its occurrence and the character of the seam, which is practically horizontal, favor mining it in a manner similar to Carlsbad.

"The area contains ample reserves for a mine that will produce at more than twice the rate of our Carlsbad mine."

Mr. Ware also said that the site of the new mine is closer to the market than other potash discoveries in Canada, and the potash can be shipped at favorable freight rates to U.S. and foreign consumers.

The contract for construction for the mine shaft and several surface structures has been let to Utah Construction Co., of San Francisco, and work will be rushed to complete the buildings before the end of the summer. Merton I. Signer, IMC's resident manager, will supervise the construction.

International's other Canadian operations are a plant at Blue Mountain in Peterborough County, Ontario, producing nepheline syenite, a raw material used in glass and ceramic manufacturing, and a feldspar mine 40 miles east of Ottawa. At its Niagara Falls, N.Y. plant, International processes raw potash into potassium chemicals.

GARBAGE TREATMENT PLANT

CINCINNATI — Organics, Inc., a new $100,000 Ohio corporation, is building a new plant here to grind and treat garbage for use on the soil. The product, under the trade name "Nutrio," will be sold initially to flower and vegetable growers and golf courses in this area, with national distribution being developed later.

Rain Dominates Weather in Southwest

KANSAS CITY—Rain continues to show up in weather reports from many parts of the winter wheat area, helping to build subsoil moisture and improve the over-all outlook for the wheat crop, but now also acting as a possible detriment to development of the crop in some places.

The wet weather has been a particular problem in Texas, eastern Oklahoma and eastern Kansas. The growth is too rank in some instances and lodging is a danger. Wheat is heading out in the southern counties of Kansas. A little speckled leaf blotch has shown up in the southeastern part of the state. In the western part of the state pale western cutworms have damaged the stand in some counties.

Leaf rust has shown up in wheat fields of Oklahoma where dry weather and sunshine are needed. Losses could be heavy if the wet weather continues.

Texas wheat growing sections are expected to turn out the best crop in recent years, even though wind and driving rain have caused lodging, and rust has shown up in some areas. Part of the optimism has been generated by the outlook for the late germinating wheat.

The Nebraska prospects are quite good with moisture considerably better than a year ago. The crop is reported to have a lush growth with excellent color and a minimum of insects and disease for this time of year.

DOW DIVIDEND

MIDLAND, MICH.—The board of directors of the Dow Chemical Co. has declared a dividend of 30¢ per share on its common stock payable July 15, 1957, to stockholders of record at the close of business on June 14, 1957.

Diamond Alkali Sales Gain, Earnings Dip in First Quarter

CLEVELAND—First quarter 1957 sales of Diamond Alkali Co., Cleveland showed a slight gain over the same period last year while earnings declined 18%, it was reported at the annual stockholders meeting by Raymond F. Evans, chairman and chief executive officer of the firm. The meeting was held at the company's national headquarters in Cleveland. Net sales of Diamond chemicals for the first quarter of 1957 totaled $30,932,903, compared to $30,638,686 for the corresponding 1956 period.

First quarter 1957 net income, after provision for federal income taxes, amounted to $2,255,048, equivalent to $.84 per share on 2,699,299 common shares outstanding March 31, 1957. This compares with a net profit of $2,740,575 or $1.02 per share for the same 1956 period.

In discussing results for the first three months of 1957 compared to the same quarter in 1956, Mr. Evans pointed out that results for both periods include for the first time the operation of Diamond Black Leaf Co., now 99% owned.

"Our first quarter operations for the current year reflect a business pattern that is becoming increasingly common in these days of steadily rising costs," Mr. Evans said. "It's a pattern of increased sales revenue on the one hand, and decreased earnings on the other. The small increase in sales revenue is a result of a higher price level in 1957. Actual tonnage produced and shipped was below the corresponding quarter last year.

"The reduction in net income during the same period is caused by the squeeze on margins as a result of higher freight, labor and materials costs and increased seasonal losses of Diamond Black Leaf Co. above 1956. Other factors limiting earnings are our stepped-up research and development activities, and start-up and anticipated abandonments in connection with our capital improvement program.

"While sales and earnings reflected some softening in the early part of the quarter, they recovered significantly in March. Second-quarter prospects are favorable and, assuming a continuation of demand at current levels, we believe our 1957 results will approximate those of 1956."

At the stockholders meeting, all present directors of the company were reelected and membership of the board increased to ten with the election of A. H. Ingley, vice president-manufacturing since March, 1948.

Following their election of Mr. Ingley to the board, stockholders approved amendment of the certificate of incorporation of the company to increase the authorized common stock from 3,000,000 to 4,500,000 shares. This action was taken, Mr. Evans commented, "to provide the company with sufficient additional shares for any possible expansion through advantageous acquisitions of securities or other properties and to provide a means of securing additional equity funds."

Immediately following the stockholders meeting, the Board of Directors met and named all other officers of the company to continue in their present posts respectively.

A LOT OF INSECTS

WASHINGTON—U.S. Department of Agriculture entomologists identified about a half million insects last year for farmers, gardeners, agricultural workers, students, industrial researchers and others. A total of 86,055 species was classified during the year. Among the identifications was that of the spotted alfalfa aphid, new to 16 states in 1956.

Henry A. Arnold

Henry A. Arnold to Head Olin Mathieson International Unit

NEW YORK — Formation of Olin Mathieson International Corp. and appointment of Henry A. Arnold as the new corporation's president was announced May 14 by Thomas S. Nichols, chairman of Olin Mathieson Chemical Corp., and Stanley de J. Osborne, president. The new company is a wholly owned subsidiary.

Mr. Arnold will be responsible for all of Olin Mathieson's overseas activities which include the production and marketing of Squibb medicinals and pharmaceuticals, Mathieson industrial and agricultural chemicals, Winchester sporting arms and ammunition, non-ferrous metals, and cellophane and paper packaging products.

Before his appointment as president of the new international corporation, Mr. Arnold had been vice president of Olin Mathieson in charge of its South American operations and was also president and managing director of E. R. Squibb & Sons Argentina, S.A.

Export Subsidiary Formed By Fabricated Metals, Inc.

SAN LEANDRO, CAL. — Fabricated Metals, Inc., has formed a wholly-owned subsidiary corporation, Fabricated Metals Western Export, Inc., to sell liquid fertilizer plants and storage, transportation and injection equipment throughout North and South America. C. B. Coleman, president of the sales corporation, comments that the rapid growth of the liquid fertilizer industry has prompted the company to intensify its activities in this area.

Fabricated Metals has already established its name outside the U.S. Last year it built a liquid fertilizer plant for the Rainbow Chemical Co. of Tilsbury, Ontario, which is owned by Essex Hybrid Seed Co., Ltd., Riverside, Ontario, and for the past 8 years, FM has supplied liquid fertilizer equipment to Mexico.

Mexico, Central America and many parts of South America are experiencing a rapid population increase, Mr. Coleman observes, and in addition, some of these countries are predominately mountainous, with limited arable farm areas. With the need existing for increased food production, increases in irrigation and technical know-how in liquid fertilization are developing rapidly, he says.

Arkansas Sales

LITTLE ROCK — Arkansas fertilizer sales during March totaled 74,693 tons, compared with 92,766 tons in March, 1956, the Arkansas State Plant Board has reported. Sales for the nine months ended last March 31 totaled 180,814 tons, compared with 202,280 tons in the comparable 1955-56 period.

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Grace Reports Higher Income; Davison Profit Decreases

NEW YORK—Consolidated net income for 1956 was $19,785,020 compared with $18,780,394 for 1955, according to the annual report of W. R. Grace & Co. Total sales and operating revenues for the year were $438,136,637 compared with $427,066,329 in 1955, an increase of 2.6%.

"Profits from Davison's agricultural chemical materials were below those of 1955," the report stated. "Severe price competition existed in the mixed fertilizer business, and these operations just broke even for the year despite higher tonnage sales. The current outlook for agricultural chemicals and mixed fertilizer is somewhat more promising.

"The Grace Chemical Division's ammonia unit, which operated above rated capacity thoughout 1956, sold its entire output and produced improved operating income. These results were achieved in the face of the present excess capacity within the industry. Technical difficulties encountered in operating the urea section continued for a longer period than anticipated and adversely affected both costs and production. However, since January of 1957 this unit has been operating at about rated capacity."

Harold S. McCormick, Jr. Joins Diamond Black Leaf

CLEVELAND—Harold S. McCormick, Jr. of Brooklyn has joined Diamond Black Leaf Co., Cleveland, as a sales representative for tobacco stems to the fertilizer and poultry industries, it was announced here May 8 by Emil C. Gerdes, manager of commercial products.

Mr. McCormick comes to the Diamond Black Leaf organization from the United States Overseas Corp., Washington, D.C., importers and exporters, where he has been in charge of ocean vessel charter work and sales for the past eight months.

From 1955 to September, 1956, Mr. McCormick was associated with Sohio Chemical Co., Lima, Ohio, in various capacities concerned with fertilizer sales, supply and distribution. His previous experience includes three years as plant manager for Linson & McCormick, Chicago, formulators of fertilizers, and seven years as a sales representative at New York and Baltimore for H. J. Baker & Bro., importers and exporters of fertilizers, feeds and chemicals.

Mr. McCormick was graduated in 1945 from Georgetown University, Washington, D.C., with a B.S. degree in foreign service.

Virginia-Carolina Nine Months Net Declines

RICHMOND, VA.—Net income after income taxes of Virginia-Carolina Chemical Corp. for the nine months ended March 31 was $361,690, compared with $514,706 for the comparable period a year earlier, according to a report to the stockholders.

Net sales totaled $44,298,800 in the period ending last March 31, compared with $45,331,377 in the nine months ended March 31, 1956.

"Despite adverse weather conditions in many sections of the country, profits from the fertilizer division, which represent a major portion of the company's operations, are showing improvement," the stockholders were told.

The company said that in comparing the financial results with those of a year earlier, consideration should be given "the special items of a nonrecurring nature included in miscellaneous charges." These special items total $500,000 and result from a study of the company's assets currently under way, the company said.

Escambia Chemical Names Research Section Head

CAMBRIDGE, MASS.—Dr. L. H. Sutherland has been appointed section head in the research program of Escambia Chemical Corp., according to an announcement by Dr. Nat C. Robertson, vice president and director of research.

Dr. Sutherland will be in charge of the analytical and certain of the process groups, and his activities will be divided between Cambridge and Newton, Mass., where Escambia presently has its research and technical service facilities.

From American Cyanamid Co. in New Orleans, where he was chief development chemist, Dr. Sutherland joined the Escambia group at National Research Corp. Jan. 1, 1956. He obtained his A.B. degree from Dartmouth and his M.S. and Ph.D. degrees in organic chemistry from Pennsylvania State University.

4,000 Soil Samples Tested in 1956 at Oregon Laboratory

CORVALLIS, ORE.—More than 4,000 soil samples from Oregon farms were tested during the past year by the Oregon State College soil testing laboratory. Larry Alban, soils scientist in charge of the laboratory, says 75% of soils tested to date are from the Willamette Valley.

While major fertility needs fall into regional patterns, the tests show wide individual variations even within counties. For example, lime requirements to neutralize acid soils of the Willamette Valley and coastal strip may range from zero to more than five tons per acre.

Twenty five percent of Willamette Valley soils tested "low to medium" in potash and 57% were "low to medium" in phosphate. More than half the southern Oregon soils tested were "low to medium" in potash and many were deficient in phosphorus. Coastal lands were extremely low in phosphorus and some irrigated areas of eastern and central Oregon are getting excellent crop response from phosphate applications.

About 80% of Willamette Valley soils tested low in boron. Some northern Willamette Valley soils showed indications that magnesium applications may boost yields of cabbage, cauliflower and broccoli.

Robert L. Snook | Gerry Morrical | H. M. Gwyn, Jr.

Magnet Cove Barium Appoints Three New District Managers

HOUSTON—Three appointments to the newly created positions of district managers of the industrial products department of Magnet Cove Barium Corp. have been announced by George H. Moore, sales manager, industrial department.

Appointed were Robert L. Snook, formerly sales representative, to southwestern district manager; Gerry Morrical, formerly sales representative, to midwestern district manager; and H. M. Gwyn, Jr., who joins the department from Minerals and Chemicals Corp., to eastern district manager.

The appointees will be responsible for sales development in their districts.

The industrial products department is a relatively new venture for Magcobar, an oil well drilling mud firm, and is part of its diversification program aimed at developing new markets for its products. It is concerned with marketing Wyoming bentonite, attapulgite fullers earth, barytes and a Kaolin-type Texas clay to industries such as foundry, refining, chemical and insecticide.

Mr. Snook was chief chemist and plant manager for Acock Laboratories, Ltd., of Austin, Texas, prior to joining Magcobar in February of last year. Previously he had served as a chemist with Agricultural Chemicals, Inc., Llano, Texas. He is a graduate of the University of Texas with a B.S. degree in chemistry. He will live in Houston.

A graduate of Indiana University, Mr. Morrical served successively as a teacher and football coach at Gannon College, Erie, Pa.; production scheduler in the foundry production department of Dodge Manufacturing, Mishawaka, Ind.; and as a foundry engineer with Oliver Corp. He joined Magcobar in August of 1954. He will live in Des Plaines, Ill.

Mr. Gwyn, for over 20 years, was associated with Attapulgus Clay Co. and its successor, Mineral and Chemicals Corporation of America, in sales and technical service capacity. For ten years he handled sales of attapulgite clays to the insecticide trade. Mr. Gwyn will live in Philadelphia.

Farm Leaders Discuss Cotton Programs

COLUMBIA, S.C. — Cotton consumption may drop to a level of seven to nine million bales, or, it may go up as high as 18 to 20 million bales, Farm Bureau leaders from five Southern states were told here recently.

Outlining alternatives to the group was Rhea Blake, executive vice president of the National Cotton Council. The meeting, also attended by George Chance, National Cotton Council president, discussed the possibility that cotton farmers will be offered three choices in a referendum to be held in the fall on application of quotas to the 1958 crop. Growers may be called upon to decide on one of these:

1. Increasing allotments and reducing price support levels, or

2. Restricted allotments and high support, or

3. No allotments and very low support.

Attending the meeting were leaders from South Carolina, North Carolina, Virginia, Georgia, and Florida.

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EDUCATION NEED SHOWS UP . . .

Gypsy Moth Program Hit by Scared Citizens

That there still remains a considerable educational job to be done by the pesticide industry in educating the public on the safety of toxicants, is illustrated by recent excited action on the part of some Long Island residents who are protesting the government's gypsy moth eradication program in that area.

The 2,400,000-acre spray program to halt the depredations of this pest which is highly destructive to forest and shade trees, is being carried out mainly in the states of New York, Pennsylvania and New Jersey. The citizens' groups, residing in Suffolk and Nassau counties of Long Island, have asked a Federal court to prevent this program from being conducted on their lands. They are fearful lest the spray might impair their health and endanger their lives.

The complaint declared that DDT is "recognized and admitted by the defendants to be a delayed-action, cumulative poison such as will inevitably cause irreparable injury and death to all living things, including human beings, animals, birds, insects and the predators and parasites of harmful insects, if ingested, inhaled or brought into contact therewith in sufficient quantities or over a sufficient period."

Property owners wishing to maintain their places as neutral ground in the gypsy-moth control program asked that the Federal government and the State of New York be restrained from spraying their lands with DDT.

This group charged that the spraying would be injurious to gardening and that the toxicant was likely to act upon predators and parasites more powerfully than upon the pests themselves. This would upset the balance of nature, they declared, thus making it a self-defeating operation.

* * *

In reply to this type of hysteria, three governmental agencies have issued a joint public statement endorsing the safety of methods established for the spray program. The three agencies are the Public Health Service of the Department of Health, Education and Welfare; the Fish and Wildlife Service of the Department of the Interior; and the Agricultural Research Service of USDA.

On the basis of many years' experience with DDT, they emphasize that this insecticide when used in the manner specified for control of the gypsy moth, is not injurious to man nor farm animals, and offers slight if any hazard to birds and other wildlife. Moreover, it is also not likely to have any serious effect on fish populations in the sprayed areas.

Both the methods of application and the formulations used have been improved during the past few years, the statement pointed out. Pilots are highly skilled, their planes are well-fitted out with good spraying equipment, radio contact with the ground and with supervisory aircraft is maintained to control the application, and every known safety device is used.

The material itself gives no real cause for concern. Responsible officials concerned with public health, fish and wildlife conservation and agricultural research and pest control, both in the Federal government and in many states, agree that aerial spraying of forested land and urban shade trees with DDT at the rate of one pound an acre is a sound insect-control practice.

The U.S. Public Health Service points out that DDT has been in widespread use both in the U.S. and other countries of the world for well over a decade. Naturally, it is potentially toxic to humans who ingest or are exposed to large amounts, but there have been no substantiated cases of DDT poisoning among residents in areas where this insecticide has been sprayed from the air.

On the contrary, one of the outstanding accomplishments in the history of the world is the protection of millions of people from malaria through DDT control of mosquitoes. The practice of direct and extensive spraying of human dwellings, animal quarters, and their surroundings has been given broad approval by the expert committees of the World Health Organization.

Another point not to be forgotten, is the fact that 10% DDT powder was used directly on thousands of refugees and other persons abroad during and after World War II to control body lice that carry typhus. International health agencies have reported no authenticated case of DDT poisoning in these programs in which the dosage of the insecticide applied directly to the human body was many times greater than the possible exposure resulting from the current gypsy moth spray program.

As to the effects of this spray program on fish and wildlife, that agency of the Department of the Interior has assured that mammals and birds will not be harmed by a single aerial spray treatment of DDT at 1 pound an acre. "Although it is well recognized that small numbers of fish in streams and shallow ponds may be killed by such a spray program, no damaging reduction in fish populations need be feared," the statement assures.

If the residents of the sprayed areas think that the program was suddenly thought up and executed without regard to side consequences, they should be reminded that before any program of this type is undertaken, it is thoroughly reviewed by research entomologists, public health officials, fish and wildlife agencies, on the Federal, State and local levels concerned with the affected areas. Actual spraying is finally launched only after detailed procedures have been carefully worked out and jointly agreed to by responsible State and Federal agencies.

Householders should keep in mind, too, that eradication of the gypsy moth with a single treatment of DDT on a community-wide basis involves far less hazard than would be the case if the infestation were to be controlled by repeated local treatments on an annual basis.

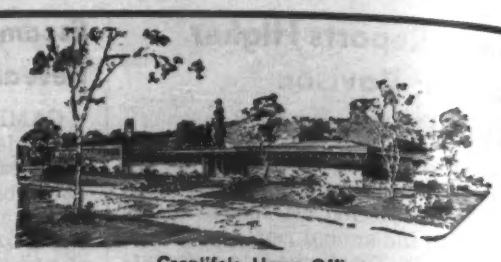
Yes, there is an educational job to be done. A continual hammering away with facts is the eventual answer, but it is evident that such things can't be accomplished in a hurry. Patience and persistence comprise the anwser.

Canada Advises Soil Thrift

"It is time we opened a soil-saving account. The virgin land found in Canada up to a century ago was a very wealthy bank account, but it has been depleted by many withdrawals.

"The conservation work that has been done during the past twenty-five years looks small against the backlog of things undone, but it is encouraging. We have been like adolescents supported by wealthy and indulgent parents, and now we are beginning to show prudence in approaching the wise handling of our limited resources.

"We must preserve the best that has been attained, change practices that have proved wasteful and dangerous, and control new forces or provide for their assimilation."—From bulletin issued by Royal Bank of Canada, Montreal, entitled "On Using Soil Wisely."



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EXECUTIVE AND EDITORIAL OFFICES — 2501 Wayzata Blvd., Minneapolis, Minn. Tel. Federal 2-0575. Bell System Teletype Service at Minneapolis (MP 179), Kansas City (KC 295), Chicago (CG 340), New York (NY 1-2452), Washington, D.C. (WA 82).

Published by
THE MILLER PUBLISHING CO.
2501 Wayzata Blvd., Minneapolis, Minn.
(Address Mail to P. O. Box 67, Minneapolis 1, Minn.)

Associated Publications—THE NORTHWESTERN MILLER. THE AMERICAN BAKER. FEEDSTUFFS. MILLING PRODUCTION

MEETING MEMOS

May 23—Central California Agricultural Forum, Bruce's Lodge, Fowler, Cal.

Dec. 9-12—Chemical Specialties Manufacturers Assn., Hollywood Beach Hotel, Hollywood, Fla.

Dec. 10-12 — North Central Weed Control Conference, 14th Annual Meeting, Hotel Savory, Des Moines, Iowa. Lyle A. Derscheid, agronomy department, South Dakota State College, Brookings, Program Chairman.

EDITOR'S NOTE — The listings above are appearing in this column for the first time this week.

May 20-21—National Cottonseed Products Assn., 61st Annual Convention, Shoreham Hotel, Washington, D.C.

May 20-22—Chemical Specialties Manufacturers Assn., Drake Hotel, Chicago.

June 6-8—Manufacturing Chemists Assn., Annual Meeting, Greenbrier Hotel, White Sulphur Springs, W.Va.

June 9-12—National Plant Food Institute, annual meeting, Greenbrier Hotel, White Sulphur Springs, W. Va.

June 17-19—Fifteenth Annual Convention of the Association of Southern Feed and Fertilizer Control Officials, Dinkler-Tutwiler Hotel, Birmingham, Ala., Bruce Poundstone, Kentucky Agricultural Experiment Station, Lexington, Ky., Secretary-Treasurer.

June 18-20—Pilot Plant Demonstration of Developments in Fertilizer Technology, Tennessee Valley Authority, Wilson Dam Laboratories, Sheffield, Ala.

June 23-26—American Society of Agricultural Engineers, Golden Anniversary meeting, Michigan State University, East Lansing, Mich.

June 26-28—Eighth Annual Fertilizer Conference of the Pacific Northwest, Benson Hotel, Portland, Ore. B. R. Bertramson, Washington State College, Pullman, Wash., chairman.

June 26-28—Pacific Branch, Entomological Society of America, 41st Annual Meeting, Multnomah Hotel, Portland, Ore., H. H. Keifer, 1112 Swanston Drive, Sacramento 14, Cal., Secretary-Treasurer.

July 4-5—Alabama Seedsmen's Assn., Battle House, Mobile, Ala.

July 10-14—Plant Food Producers of Eastern Canada, Manoir Richelieu, Murray Bay, Quebec.

July 11-12—Great Plains Anhydrous Ammonia Meeting, Kansas State College, Manhattan, Kansas.

July 17-19—Southwestern Fertilizer Conference and Grade Hearing, Galvaz Hotel, Galveston, Texas.

Aug. 13-14—Ohio Pesticide Institute, Summer Meeting, Ohio Agricultural Experiment Station, Wooster, Ohio, J. D. Wilson, Ohio Agricultural Experiment Station, Secretary.

Aug. 14 — Connecticut Agricultural Experiment Station Field Day, Mt. Carmel, Conn. Dr. James G. Horsfall, New Haven, director.

Aug. 28-31—Soil Conservation Society of America, Annual Convention, Asilomar, Cal.

Sept. 5-6—Great Lakes States Anhydrous Ammonia Meeting, Michigan State University, East Lansing, Mich.

Sept. 8-15—International Congress of Crop Protection, Hamburg, Germany.

Oct. 2-4—Eleventh annual Beltwide Cotton Mechanization Conference, Shreveport, La.

Oct. 3-5—Pacific Northwest Plant Food Assn., Annual Convention, Sun Valley, Idaho, Leon S. Jackson, Lewis Bldg., Portland 4, Ore., Secretary.

Oct. 14—Sixth Annual Sales Clinic of the Salesmen's Assn., American Chemical Society, Hotel Roosevelt, New York.

Oct. 17—Conference on Chemical Control Procedures for Industry Chemical Control Analysts, Shoreham Hotel, Washington, D.C. Sponsored by National Plant Food Institute.

Oct. 29-30—Seventh Annual Northwest Garden Supply Trade Show of Oregon Feed & Seed Dealers Assn., Portland, Ore. Masonic Temple.

Oct. 29-31—Entomological Society of Canada and Entomological Society of Alberta, Annual Meetings, Lethbridge, Alberta.

Nov. 3-5—California Fertilizer Assn. 34th Annual Convention, St. Francis Hotel, San Francisco. Sidney H. Bierly, General Manager, 475 Huntington Drive, San Marino 9, Cal.

Nov. 6-8—Fertilizer Industry Round Table, Sheraton Park Hotel, Washington, D.C.

Nov. 17-19—National Fertilizer Solutions Assn., Annual Convention, Netherland-Hilton Hotel, Cincinnati, Muriel F. Coolie, 2217 Tribune Tower, Chicago 11, Ill.

Dec. 1-3—Southern Seedsmen's Assn., Jung Hotel, New Orleans.

Dec. 2-5—Entomological Society of America, 5th Annual Meeting, Hotel Peabody, Memphis, Tenn., R. H. Nelson, 1530 P St., N.W., Washington 5, D.C., Executive Secretary.

Dec. 2-5—Cotton States Branch, Entomological Society of America, 32nd Annual Meeting, Hotel Peabody, Memphis, Tenn., M. E. Merkl, Box 202, Leland, Miss., Secretary-Treasurer.

Dec. 11-13 — Agricultural Ammonia Institute, Seventh Annual Meeting, Hotel Marion, Little Rock, Ark., Jack F. Criswell, Claridge Hotel, Memphis, Executive Vice President.

Dec. 12-13—Beltwide Cotton Production Conference, Hotel Peabody, Memphis, Tenn.

1958

Jan. 7-8—Texas Fertilizer Conference, Texas A&M, College Station, Texas.

Jan. 13-15, 1958—Weed Society of America and Southern Weed Conference, Joint meeting. Peabody Hotel, Memphis, Tenn.

Jan. 21-23—California Weed Conference, San Jose, Cal.

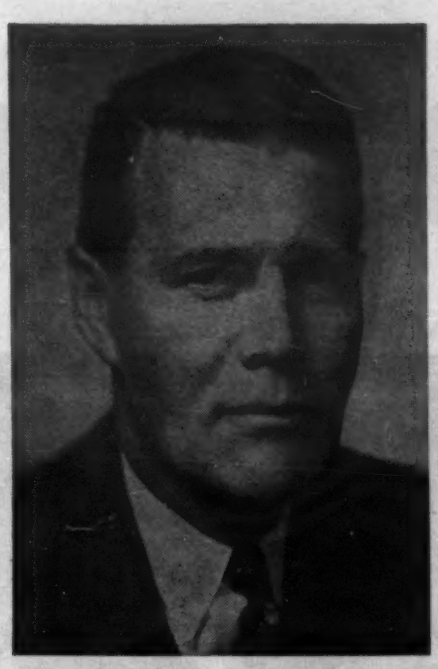
Feb. 13-14—Agronomists-Industry Joint Meeting, Edgewater Beach Hotel, Chicago, sponsored by the Middle West Soil Improvement Committee, Z. H. Beers, 228 N. LaSalle St., Chicago 1, Ill., Executive Secretary.

March 4-5—Western Cotton Production Conference, Hotel Cortez, El Paso, Texas, Conference Sponsored by the National Cotton Council and the Five State Cotton Growers Assn.

July 18-19—Southwest Fertilizer Conference and Grade Hearing, Buccaneer Hotel, Galveston, Texas.

DEAN TO BE HONORED

BURLINGTON, VT.—J. E. Carrigan, dean of the University of Vermont College of Agriculture and director of the Agricultural Experiment Station, will be honored at a dinner in Barre June 1. Mr. Carrigan, who has been on the University staff 43 years, will retire June 30.



William R. Adams

HEADS ST. REGIS — William R. Adams has been elected president of St. Regis Paper Co., succeeding Roy K. Ferguson, who continues as chairman of the board and chief executive officer. Mr. Adams had been vice-president in charge of manufacturing. In a series of other top executive changes St. Regis announced that Edward R. Gay was elected vice-chairman of the board. Mr. Gay had been executive vice president. In addition, Arch Carswell, formerly vice president in charge of sales, and Benton R. Cancell, president of Rhinelander Paper Co., a St. Regis subsidiary, were elected executive vice presidents.

ED BERGSTROM DIES

PORTLAND, ORE.—Funeral services were held here recently for Ed Bergstrom, 50, manager of Portland's North Coast Seed Co. for the past 17 years, who died from a heart attack. Mr. Bergstrom had been actively engaged in the seed business for over 30 years, and joined North Coast Seed Co. in 1938. In 1940 he was advanced to the position of sales manager.

Classified Ads

Classified advertisements accepted until Tuesday each week for the issue of the following Monday.

Rates: 15¢ per word; minimum charge $2.25. Situations wanted, 10¢ a word; $1.50 minimum. Count six words of signature, whether for direct reply or keyed care this office. If advertisement is keyed, care of this office, 20¢ per insertion additional charged for forwarding replies. Commercial advertising not accepted in classified advertising department. Advertisements of new machinery, products and services accepted for insertion at minimum rate of $10 per column inch.

All Want Ads cash with order.

SITUATIONS WANTED

PRESIDENT, AGRICULTURAL CHEMICAL manufacturing company, with 15 years' experience, research development, sales and management, desires position in management or sales in a foreign field. Experience in South America and Africa. Chemistry, entomology, plant pathology, doctorate training. Address Ad No. 2710, Croplife, Minneapolis 1, Minn.

Fire Damages Plant of Eastern Guano Co.

FAYETTEVILLE, N.C. — Fire caused an estimated $250,000 to the Eastern Guano Co. plant here May 4. Carl Gain, fire chief, said the blaze started in the roof of the building, possibly from a short circuit in wiring. A quantity of fertilizer materials was destroyed.

CHEMIST NAMED

LOS ANGELES — Robert P. Rice has joined American Potash & Chemical Corp. as chief control chemist at the company's Henderson, Nevada, plant, according to an announcement by John S. Vander Laan, AP&CC administrative assistant at Henderson.

REMEMBER TO ORDER
CHASE BAGS
There's None Better!

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For greater yields, fewer complaints stress early production of cotton!

Toxaphene Is the Keystone of a Successful Cotton Insect Control Program In Any Area

Cutworms, thrips, fleahoppers, overwintered boll weevils—ignored by many cotton farmers—can take the profit out of a crop early in the season, leaving the way open for hard-to-control infestations that may get out of hand later in the year.

Experts stress the value of early cotton production. They say a crop that matures early is money in the bank, leaves the farmer free to concentrate on a "bonus" from a profitable top crop. *Toxaphene is the indispensable insecticide—the keystone—for a well-planned insect control program because it kills all major cotton insect pests, helps keep fields free of infestations that can develop into real trouble in July and August.*

Farmers who follow a toxaphene program become repeat toxaphene customers—and for good reason! Toxaphene-treated fields produce consistently high yields year after year. Successful cotton growers tell us they make toxaphene the keystone of their insect control program.

NX57-2

TOXAPHENE HERCULES POWDER COMPANY